**Appendix A**

*Taylor v. Crawford*, No. 06-3651, Opinion (8th Cir. June 4, 2007) ..... 1a

**Appendix B**

*Taylor v. Crawford*, No. 06-3651, Judgment (8th Cir. June 4, 2007) ..... 25a

**Appendix C**

*Taylor v. Crawford*, No. 05-4173-CV-C-FJG, Order (W.D. Mo. June 26, 2006) ..... 27a

**Appendix D**

*Taylor v. Crawford*, No. 05-4173-CV-C-FJG, Order (W.D. Mo. Sept. 12, 2006)..... 45a

**Appendix E**

*Taylor v. Crawford*, No. 06-3651, Rehearing Order (8th Cir. Aug. 7, 2007) ..... 49a

**Appendix F**

Constitutional Provision Involved..... 50a

**Appendix G**

Excerpt of Transcript of Testimony of John Doe No. 1, *Taylor v. Crawford*, No. 05-4173-CV-C-FJG (W.D. Mo. June 5, 2006)..... 51a

**Appendix H**

Excerpt of Transcript of Bench Trial Proceedings, *Taylor v. Crawford*, No. 05-4173-CV-C-FJG (W.D. Mo. June 13, 2006)..... 104a

**Appendix A**

**United States Court of Appeals**
**FOR THE EIGHTH CIRCUIT**

---

No. 06-3651

---

| | | |
|---|---|---|
| Michael Anthony Taylor,<br>Appellee,<br>v.<br><br>Larry Crawford, Director, Missouri Department of Corrections;<br>James D. Purkett, Superintendent, Eastern Reception Diagnostic & Correctional Center,<br><br>Appellants. | * | Appeal from the United States District Court for the Western District of Missouri.<br><br>[PUBLISHED] |

---

Submitted: January 10, 2007
Filed: June 4, 2007

---

Before RILEY, BEAM, and HANSEN, Circuit Judges.

---

HANSEN, Circuit Judge.

The State of Missouri, through its officers Larry Crawford and James D. Purkett (collectively "the State"), appeals the district court's judgment, which concludes that Missouri's lethal injection protocol is unconstitutional.

Finding no wanton infliction of cruel and unusual punishment in violation of the Eighth Amendment, we reverse.

I.

Michael Anthony Taylor pleaded guilty and was sentenced to death in Missouri state court for the abduction, abuse, and brutal murder of 15-year-old Ann Harrison.[1] His convictions and sentence have withstood judicial scrutiny on direct appeal, *see State v. Taylor*, 929 S.W.2d 209 (Mo. 1996) (en banc), cert. denied, 519 U.S. 1152 (1997), and in federal habeas corpus proceedings, *see Taylor v. Bowersox*, 329 F.3d 963 (8th Cir. 2003), cert. denied, 541 U.S. 947 (2004). Mr. Taylor filed this 42 U.S.C. § 1983 action in the federal district court, the timeliness of which was not contested, challenging the State's three-chemical procedure used in carrying out a sentence of death by lethal injection. *See* Mo. Rev. Stat. § 546.720 (describing the manner of execution as either the administration of lethal gas or lethal injection, and authorizing the department director to make sufficient provisions for carrying out either method).

At the time Mr. Taylor brought suit, the State intended to use its unwritten procedure of administering a lethal combination of three chemicals through an intravenous line (IV) placed in the femoral vein. In prior executions, a physician placed the IV and prepared the chemicals, and nonmedical prison personnel administered the injections in a three-step process. First, a 5-gram dose of sodium pentothal (also known as thiopental) was injected to render the inmate unconscious. Second, a 60-milligram dose of pancuronium bromide was administered to paralyze the inmate's muscles, and third, a 240-milliequivalent injection of potassium

[1] We will not here recount the facts of his crime as they are not relevant to this appeal.

chloride was injected to stop the heart. A saline flush followed each injection. Mr. Taylor now asserts that Missouri's procedure creates a significant risk that he might suffer the wanton infliction of pain because if the first chemical, thiopental, does not sufficiently anesthetize him, he will feel the pain of the third chemical, potassium chloride, which indisputably will cause an excruciating burning sensation as it travels through his veins to induce a heart attack, and yet he would be unable to indicate that he is experiencing pain due to the paralyzing effects of the second chemical, pancuronium bromide.

The district court failed to set a hearing on the merits of Taylor's complaint in a timely fashion, and this court ultimately ordered the chief district judge to reassign the case to a different judge who would hold an immediate hearing and make a ruling.[2] In an order dated January 31, 2006, the district court initially concluded that the three-chemical sequence was not unconstitutional, and Mr. Taylor appealed. Concluding that justice was not served by the expedited nature of that hearing, though the district court had fully complied with our prior order requiring it, we remanded for additional discovery and a continuation of the evidentiary hearing to provide Mr. Taylor an adequate opportunity to fully present the merits of his claim.

On remand, the district court permitted the parties to engage in a period of additional discovery and reconvened the evidentiary hearing on June 12-13, 2006. The additional

---

[2] The procedural particularities of this case are recounted fully in our prior decisions, *Taylor v. Crawford*, 445 F.3d 1095, 1096-98 (8th Cir. 2006) (retaining jurisdiction but remanding for additional discovery and a continued evidentiary hearing), and *Taylor v. Crawford*, 457 F.3d 902, 904 (8th Cir. 2006) ( remanding for the district court to consider the State's proposed written protocol in the first instance). We will not repeat that procedural history here, except as necessary for a clear understanding of the current appeal.

discovery permitted access to the Department of Correction's documents and logs pertaining to the last six executions and a limited anonymous deposition of John Doe I ("Dr. Doe I"), the physician in charge of mixing the chemicals and inserting the IVs for the past six executions. The execution logs reveal that Missouri does no toxicology reporting following an execution to ascertain the amount of chemicals actually in the body at the time of death. Dr. Doe I indicated that the chemical amounts listed in the execution logs are not always accurate as they represent only "an approximation" of the chemicals used and disposed of; he does not record the amount of the dose actually administered to the inmate as the logs are used only for prison inventory and DEA reporting requirements. (*See* Appellants' App. at 647-49.) In each of the past six executions, however, death occurred in five minutes or less from the time the first chemical was administered, and there was not a scintilla of evidence that any prisoner ever suffered any pain other than what was necessary to acquire access to the prisoner's circulatory system through the insertion of the needed intravenous lines.

Dr. Doe I revealed that he has dyslexia, which causes him to transpose letters and numbers, but he asserted that his condition is not significant to his work. "I can make these mistakes, but it's not medically crucial in the type of work I do as a surgeon." (*Id.* at 660.) As he understood Missouri's unwritten procedure, he had the independent authority to alter the chemical doses at will based on his medical judgment, and that in fact, there were occasions when he chose to give a dose of only 2.5 grams of thiopental without notifying the director, but in his opinion, this dose was sufficient. Under the unwritten procedure, Dr. Doe I would monitor the anesthetic depth of the inmate to ensure he was fully unconscious solely by observing the inmate's facial expression through an observation window.

The district court allowed the plaintiff to conduct a Rule 34 inspection and videotaped tour of Missouri's execution chamber. The inspection revealed that the operations room in which the chemicals are mixed and administered is lit when the chemicals are mixed but dark during the execution, though the execution chamber remains lit during the execution. The observation window from which Dr. Doe I observes the procedure is partially obstructed by blinds, and the inmate faces away from the window. During the procedure, the inmate's face is left uncovered, but therest of his body, including the femoral vein injection site, is completely covered by a sheet.

At the continued evidentiary hearing, Mr. Taylor presented the testimony of Dr. Mark Heath, an anesthesiologist, and Dr. Thomas Henthorn, an expert in pharmacokinetics. These experts agreed that the third injection (the potassium chloride) would be exceedingly painful if administered without having first achieved adequate anesthetization of the condemned inmate.

Dr. Heath criticized the State's lack of a written protocol, asserting that a clearly written protocol is important so the procedure can be rehearsed and to ensure a humane execution. He noted that significant variations from the articulated procedure had occurred, citing Dr. Doe I's testimony that he had in fact prepared a dose of only 2.5 grams for the previously carried out execution, as well as for Taylor's previously scheduled execution despite the State's representation that it used a 5-gram dose. Dr. Heath noted that Dr. Doe I admitted he did not keep accurate chemical logs, contrary to standard practice. In Dr. Heath's opinion, Dr. Doe I, a board-certified surgeon, is not competent to oversee the induction of general anesthesia and would not be hired at any hospital in the United States as an anesthesiologist.

Dr. Heath opined that a humane execution under this three-chemical protocol requires a state of anesthesia deep enough for surgery. He admitted that a dose of either 2.5 or 5 grams of thiopental would be sufficient to reach this depth and that, in fact, rapid induction of anesthesia for surgery is generally achieved in the average adult with a 0.28-gram dose. He expressed concern, however, that setting a high dosage level alone does not guarantee the successful delivery of that dose into circulation and urged the use of additional independent monitoring to ensure successful delivery of the chemical into the bloodstream.

Dr. Henthorn testified that an anesthetic depth known as "burst suppression," which is deeper than that required for surgery, must be reached for a humane lethal injection protocol because absent this depth, it is possible to be unconscious and still feel pain. He testified that burst suppression will be achieved in one minute and 45 seconds using a 5-gram dose of thiopental and in just under three minutes using a dose of 2.5 grams. He was of the opinion that the State's past practice did not include a long enough wait time to ensure adequate anesthetization before administering the second and third chemicals. He also stated that once burst suppression is achieved with a 5-gram dose of thiopental, it will be maintained for at least 45 minutes with no additional monitoring necessary. He identified several potential problems that can adversely affect the proper delivery of the anesthetic, such as an improperly prepared dose, a leaking tube that could not be detected if the IV site is covered by a sheet, or an IV insertion error that could cause the anesthetic to be administered into tissue rather than the bloodstream.

Mr. Taylor also presented the testimony of Dr. Stephen Johnson, a radiologist and expert in femoral line placement. Dr. Johnson testified that femoral vein access,

which had been used routinely under the unwritten protocol, is unnecessary and produces an unreasonable risk of unnecessary pain. He opined that the risk of pain from the IV procedure can be significantly reduced by using peripheral access—the standard IV placement on the top of the hand.

Testifying for the State, Dr. Mark Dershwitz, an anesthesiologist, stated that rapid sequence inducement of unconsciousness is achieved in approximately 45 seconds with a dose of as little as 0.3 to 0.4 grams of thiopental in a clinical setting, and no pain beyond that point will be perceptible to the inmate. In his opinion, while the high dose of thiopental administered in the lethal injection process will achieve burst suppression, that level of anesthesia is far in excess of the anesthetic depth targeted for surgery, and in his opinion, a depth of unconsciousness sufficient to eliminate pain occurs much earlier than burst suppression. Dr. Dershwitz testified that he had recently examined the results of a bispectral index monitor ("BIS monitor") that had been used in a North Carolina execution to monitor the level of the inmate's consciousness. Dr. Dershwitz stated that a BIS value of between 60 and 40 is targeted for surgery, with 40 being the deepest level of unconsciousness used in a clinical setting. He stated that a BIS level of 40 is the point at which burst suppression begins, and any level lower than 40 is considered to be unnecessarily deep for surgery. He testified that the North Carolina execution logs indicated that a three-gram dose of thiopental was administered and the protocol required a BIS level of 60 before permitting the administration of the remaining two chemicals. Dr. Dershwitz said that the logs indicated that there had been no pause in the injection of the chemicals in that case because once the thiopental and saline flush had been completely administered, a process that lasted approximately 1-1/2

minutes, the BIS value was already at zero with a flat line electroencephalogram (EEG).

Dr. Dershwitz agreed with Dr. Henthorn that either a 2.5-gram or a 5-gram dose of thiopental, successfully delivered, will produce burst suppression requiring no further need to monitor anesthetic depth. He stated that mixing the thiopental is not a difficult task and that "certainly, most people who are intelligent can be taught to mix up a drug like thiopental properly." (June 13, 2006, Hearing Tr. at 331.) Dr. Dershwitz expressed the opinion that putting a patient to sleep is easy; the skill of the anesthesiologist lies in keeping the surgery patient stable and alive and successfully waking the patient at the end of the procedure. The last two purposes, of course, are not the objects of a lethal injection execution procedure.

Larry Crawford, the Director of the Department of Corrections (the Department) since early 2005, acknowledged that he has the overall responsibility for the execution process, that the process had been put in place before his arrival in the office with heavy reliance on the expertise of Dr. Doe I, but that he had independently considered the procedure when he first arrived. He admitted he had not been notified when Dr. Doe I made the decision to lower the dose of thiopental to 2.5 grams.

Director Crawford indicated that he was planning to issue a new directive with a defined protocol setting forth the procedure and articulating the areas of discretion. Director Crawford indicated that he was confident in Dr. Doe I's competence and expected that he would continue working with the execution process.[3]

---

[3] In a post-oral argument submission, the State informed our court that it was no longer its intention to utilize the services of Dr. Doe I. Although the State's frequent and solemn prior representations to us and to the

Director Crawford testified that he did not intend to carry out Mr. Taylor's execution before issuing a new directive, stating, "I want to assure that the process is better." (*Id.* at 377.)

Following the hearing, the district court entered an order on June 26, 2006, concluding that Missouri's existing three-chemical procedure presents an unnecessary risk that an inmate will suffer unconstitutional pain during the lethal injection process. *See Taylor v. Crawford,* No. 05-4173-CV-C-FJG, 2006 WL 1779035 (W.D. Mo. June 26, 2006) (unpublished). The district court identified several concerns with Missouri's execution protocol, namely, the lack of a written protocol specifying the chemicals and doses, the lack of consistency in its administration, the total discretion placed in the hands of Dr. Doe I, and the lack of any oversight of his conduct during the process. Additional concerns included Dr. Doe I's dyslexia, his lack of concern over how that might affect his ability to mix the lethal chemicals, and his limited ability to monitor the anesthetic depth of the inmate reliably when his view is partially obstructed by blinds, and the inmate's position in the execution room.

The district court then invoked its equitable powers to fashion a detailed remedy. Specifically, the court ordered the Department of Corrections to prepare a written protocol requiring the participation of a board-certified anesthesiologist, not less than a 5-gram dose of thiopental, certification that the inmate has achieved sufficient anesthetic depth before injecting the last two chemicals, and giving discretion to the anesthesiologist to choose the best method and location for the injection site. The order also required the Department to include a procedure for monitoring

---

district court that it had always used a 5-gram dose of thiopental proved to be erroneous, in this instance we will take the State at its word.

anesthetic depth, which may require the purchase of additional equipment and the repositioning of the inmate in the execution room; a contingency plan to deal with problems that may arise during the procedure; and an auditing process to ensure that the individuals involved are complying with the protocol. The district court further ordered that once approved, the protocol may not be changed absent prior court approval. Finally, the district court stayed all executions pending approval of a new protocol. In compliance with our prior instructions, *see Taylor*, 445 F.3d at 1099, the district court certified its order to this court.

On July 14, 2006, the State submitted a written lethal injection protocol to the district court. *Taylor* objected on grounds that this new protocol was too vague and did not follow the district court's requirement to secure the participation of a board-certified anesthesiologist. The district court correctly noted that it lacked jurisdiction to consider the new protocol because the case was on appeal to this court. On August 9, 2006, we therefore remanded the entire dispute to provide the district court the first opportunity to consider the constitutionality of the newly propounded protocol. *Taylor*, 457 F.3d at 904.

On September 12, 2006, the district court entered an order concluding that the State's written protocol, while "an improvement over the previous procedures," was still inadequate to provide sufficient constitutional protections. (Appellants' Add. at 27.) The district court ordered that to continue using the three-chemical protocol, the State must modify the proposal to provide that Dr. Doe I shall not participate, to require a physician with training in anesthesia to mix the chemicals, to provide for the possibility of purchasing additional equipment to monitor anesthetic depth, and to alter the record-keeping requirements. Instead of

complying with that order, the State sought reconsideration, which the district court denied.

The State appeals, asserting that the district court erred in concluding that its lethal injection protocol violates the Eighth Amendment. We review de novo questions of law arising under the Constitution, *Hayes v. Faulkner County, Ark.*, 388 F.3d 669, 673 (8th Cir. 2004), and the district court's findings of fact for clear error, *Royal v. Kautzky*, 375 F.3d 720, 722 (8th Cir. 2004), *cert. denied*, 544 U.S. 1061 (2005).

II.

We think it prudent at the outset to set forth clearly what this case is not about. To do so, we borrow the apt words penned recently by Judge Fogel, United States District Judge for the Northern District of California, dealing with the same issue:

> [C]ourts ... exist not to resolve broad questions of social policy but to decide specific legal and factual disputes....This case is not about whether the death penalty makes sense morally or as a matter of policy: the former inquiry is a matter not of law but of conscience; the latter is a question not for the judiciary but for the legislature and the voters. Nor is it about whether [Missouri's] primary method of execution – lethal injection – is constitutional in the abstract: the arguments and evidence presented by the parties address the specific manner in which [Missouri] has implemented that method and proposes to do so in the future.

*Morales v. Tilton*, 465 F. Supp. 2d 972, 973 (N.D. Cal. 2006) (internal citations omitted) (finding serious but

correctable deficiencies in the implementation of California's lethal injection protocol and urging California's executive branch to address the implementation problems).

The Eighth Amendment's prohibition of cruel and unusual punishments, which applies to the states through the Fourteenth Amendment, *Wilson v. Seiter*, 501 U.S. 294, 296-97 (1991), requires, in part, an inquiry into whether a punishment is excessive, and that inquiry has two aspects. *See Gregg v. Georgia*, 428 U.S. 153, 173 (1976) (plurality). "First, the punishment must not involve the unnecessary and wanton infliction of pain. Second, the punishment must not be grossly out of proportion to the severity of the crime." *Id.* (internal citations omitted). Mr. Taylor presents no argument that the penalty of death by lethal injection is grossly out of proportion to the severity of his crime. Instead, the question in this case is limited to whether the process of carrying out the lethal injection sentence involves "the unnecessary and wanton infliction of pain." *Id.*

The State begins by challenging the standard used by the district court. The State first argues that the district court erred in finding a constitutional violation on the basis of its determination that the Missouri lethal injection protocol involves an unnecessary *risk* of causing the wanton infliction of pain. The State asserts that the Supreme Court's articulation of the standard forbids only punishment that actually involves "the unnecessary and wanton *infliction* of pain," *id.* at 173 (emphasis added), not a mere risk of pain. We respectfully disagree. "An inmate's challenge to the circumstances of his confinement ... may be brought under § 1983." *Hill v. McDonough*, 126 S. Ct. 2096, 2101 (2006). In Hill, the Court included within this rule an action challenging a state's lethal injection protocol. The Court quoted the petitioner's statement of his claim, noting, "[t]he specific objection is that the anticipated protocol allegedly causes 'a

foreseeable risk of ... gratuitous and unnecessary' pain." *Id.* at 2102. While we do not imply that the Court thereby adopted a new constitutional standard, we do observe that the Court expressed no dissatisfaction with that statement of the issue, and further, we find it to be consistent with settled Eighth Amendment jurisprudence.

In general conditions-of-confinement claims involving either a prison condition allowed to exist or the specific conduct of prison officials, neither of which is sanctioned as part of the prisoner's sentence, the Court has recognized that "conditions posing a substantial risk of serious harm" may rise to the level of an Eighth Amendment violation. *Farmer v. Brennan*, 511 U.S. 825, 834 (1994). "That the Eighth Amendment protects against future harm to inmates is not a novel proposition." *Helling v. McKinney*, 509 U.S. 25, 33 (1993); *see also id.* at 34-35 (rejecting the proposition "that only deliberate indifference to current serious health problems of inmates are actionable under the Eighth Amendment," and permitting the case to proceed). "Court of Appeals cases to the effect that the Eighth Amendment protects against sufficiently imminent dangers as well as current unnecessary and wanton infliction of pain and suffering are legion." *Id.* at 34; *see also Aswegan v. Henry*, 49 F.3d 461, 464 (8th Cir. 1995) (noting that deliberate indifference to "conditions posing a substantial risk of serious future harm" violates the Eighth Amendment).

Although Mr. Taylor's situation does not fit neatly within the general conditions-of-confinement context because the conduct of which he complains is necessary to carry out his punishment, as opposed to a mere condition of his imprisonment, we nevertheless see no logical reason to disregard a substantial risk that may exist in the procedure necessary to carry out a sentence of death. It is our grave responsibility to apply constitutional principles that will

guard against the unnecessary and wanton infliction of pain in the procedure through which the State proposes to carry out a sentence of death, and to successfully do so in the death penalty context, we must consider whether the procedure to be used presents a substantial risk of inflicting unnecessary pain. We see no error in the district court's consideration of whether there is an unnecessary risk that the State's proposed lethal injection protocol will cause the unnecessary and wanton infliction of pain. *See Hudson v. McMillian*, 503 U.S. 1, 8 (1992) ("What is necessary to show sufficient harm for purposes of the Cruel and Unusual Punishments Clause depends on the claim at issue, for two reasons:" (1) we must apply the wanton infliction of pain standard by giving "due regard for differences in the kind of conduct against which the Eighth Amendment objection is lodged," and (2) the "prohibition of cruel and unusual punishments draw[s] its meaning from the evolving standards of decency that mark the progress of a maturing society, and so admits of few absolute limitations." (internal quotations and citations omitted) (alteration in original)).

We emphasize, as did the district court, that we are not concerned with a risk of accident. The focus of our inquiry is whether the written protocol inherently imposes a constitutionally significant risk of pain. "The cruelty against which the Constitution protects a convicted man is cruelty inherent in the method of punishment, not the necessary suffering involved in any method employed to extinguish life humanely." *Louisiana ex rel. Francis v. Resweber*, 329 U.S. 459, 464 (1947) (plurality). A "risk of accident cannot and need not be eliminated from the execution process in order to survive constitutional review." *Campbell v. Wood*, 18 F.3d 662, 687 (9th Cir.), *cert. denied*, 511 U.S. 1119 (1994). If Missouri's protocol as written involves no inherent substantial risk of the wanton infliction of pain, any risk that the procedure will not work as designated in the protocol is

merely a risk of accident, which is insignificant in our constitutional analysis. *Resweber*, 329 U.S. at 464 (noting that a risk of an "unforeseeable accident" interfering with the designated procedure is not constitutionally significant).

Second, the State asserts that the district court applied the wrong standard by not requiring Mr. Taylor to demonstrate deliberate indifference on the part of the prison officials in order to prevail on his § 1983 claim. As noted above, this claim is not the typical conditions-of-confinement claim challenging prison conditions in general nor does it involve the action of a particular officer that is not part of the designated punishment for the crime. *See Nelson v. Campbell*, 541 U.S. 637, 644 (2004) (articulating the difficulty of categorizing this particular type of claim). The Supreme Court requires an inquiry into the state of mind of particular state officials only where the official conduct does not purport to be part of the official penalty for the crime. *See Wilson*, 501 U.S. at 302.

> The source of the intent requirement is the Eighth Amendment itself, which bans only cruel and unusual punishment. If the pain inflicted is not formally meted out as punishment by the statute or the sentencing judge, some mental element must be attributed to the inflicting officer before it can qualify.

*Id.* at 300. The potential pain alleged in this case would be inflicted as the state-sanctioned punishment because the proposed protocol is intended to be used to carry out the lawfully imposed sentence. *See Nelson*, 541 U.S. at 644 (noting that the "imposition of the death penalty presupposes a means of carrying it out"). The infliction of capital punishment is itself a deliberate act, deliberately administered for a penal purpose. *See Wilson*, 501 U.S. at 300. The protocol at issue is created by the Department's

director, in whose discretion state law places the matter, and it is created for the purpose of carrying out the sentence in a humane manner. *See* Mo. Rev. Stat. § 546.720 (placing the responsibility for carrying out a lawful sentence of death by lethal injection solely within the hands of the Director of the Department of Corrections). The propriety of this proposed protocol in the first instance (that is, whether it achieves the goal of carrying out the punishment in a humane manner or in fact uses torturous methods), therefore, depends upon whether the protocol as written would inflict unnecessary pain, aside from any consideration of specific intent on the part of a particular state official.

The State relies on language in *Resweber* for its insistence that the plaintiff must demonstrate a purpose to inflict harm, but *Resweber* presented a different situation. The Court there concluded that a second attempt at electrocution (after the first attempt had failed due to technical problems) was not unconstitutional, finding there was "no purpose to inflict unnecessary pain." *Resweber*, 329 U.S. at 464 (emphasis added). A state of mind inquiry was necessary in that case because the conduct at issue — a second application of electrocution — was not authorized by statute nor was it the regular procedure adopted by state officials for carrying out a sentence of death. The Court found that the state official's decision to apply electrocution a second time was constitutional because it was the result of an accident and was not done for the purpose of inflicting pain. *See id.* (emphasizing that the unforeseeable equipment failure during the first electrocution made a second attempt necessary, and "an unforeseeable accident ... cannot ... add an element of cruelty"); *see also id.* at 471 (Frankfurter, J., concurring) (indicating that a different outcome may have resulted had there been a showing of willful multiple applications of electrocution). The conduct challenged in the present case is neither alleged to be accidental nor a deviation

from the official procedure, which would require a showing of an intent to harm or deliberate indifference. Instead, the official conduct challenged is the State's designated procedure for deliberately carrying out the prescribed penalty intended to punish the inmate.

We turn then to the task of assessing whether Missouri's lethal injection protocol amounts to cruel and unusual punishment, involving a substantial foreseeable risk of the wanton infliction of pain. The Eighth Amendment prohibits the unnecessary and wanton infliction of pain through torture, barbarous methods, or methods resulting in a lingering death. *See Gregg*, 428 U.S. at 170. The Eighth Amendment is interpreted in a flexible manner, "'acquir[ing] meaning as public opinion becomes enlightened by a humane justice.' *Id.* at 171 (quoting *Weems v. United States*, 217 U.S. 349, 378 (1910)). "'The Amendment must draw its meaning from the evolving standards of decency that mark the progress of a maturing society' and "accord with 'the dignity of man.'" *Id.* at 173 (quoting *Trop v. Dulles*, 356 U.S. 86, 100-01 (1958) (plurality)).

The evidence reveals that the only inherent risk in Missouri's written procedure arises from the specific chemicals chosen by the State to carry out the sentence of death by lethal injection. Lethal injection itself "is commonly thought to be the most humane form of execution." *Abdur'Rahman v. Bredesen*, 181 S.W.3d 292, 306 (Tenn. 2005), cert. denied, 126 S. Ct. 2288 (2006); *see also Beardslee v. Woodford*, 395 F.3d 1064, 1074 (9th Cir.) (specifically noting that humane concerns were a motivation for adopting lethal injection as the presumptive method of execution in California), *cert. denied*, 543 U.S. 1096 (2005). There is no dispute, however, that the third and last chemical chosen for use in this protocol will cause excruciating pain if the inmate is not adequately anesthetized and that use of the

second chemical in the sequence will simultaneously mask any visible sign of that pain. Because of those inherent properties of two of the chemicals chosen to carry out the sentence of death, we must carefully evaluate the designated procedure to determine whether it sufficiently safeguards against the infliction of this excruciating pain such that any lingering risk is not of constitutional magnitude.

The written protocol is a four-page document divided into six sections – (A) describing the execution team; (B) describing the preparation of the chemicals; (C) describing the process for inserting the intravenous lines; (D) setting rules for monitoring the prisoner; (E) setting rules for administering the chemicals; and (F) documenting the chemicals. The protocol requires a more than adequate 5-gram dose of thiopental, and the quantities of chemicals prescribed in the sequence may not be changed without prior approval of the department director.[4] The execution team consists of contracted medical personnel and department employees. As noted earlier, the State has indicated that Dr. Doe I will not be participating in the procedure. A physician, nurse, or pharmacist prepares the chemicals, which are injected by nonmedical department employees. A physician, nurse, or emergency medical technician holding either an "EMT-intermediate or EMT-paramedic" certification inserts the intravenous lines, establishing both a primary and a secondary IV (which must be a peripheral line) unless the

---

[4] Specifically, the procedure requires 15 syringes — the first 4 syringes contain a total quantity of 5 grams of thiopental, the next syringe contains only saline solution, then 60 milligrams of pancuronium bromide, then saline solution, then two syringes containing a total of 240 milliequivalents of potassium chloride, and the tenth syringe contains saline solution. Four additional syringes, each containing an extra 1.25 gram dose of thiopental, are prepared in case additional anesthetic is required, and one additional syringe of extra saline solution is prepared.

prisoner's physical condition prevents the use of two lines. (Appellants' Add. at 32.) The protocol provides the medical personnel with discretion to determine the best place to insert the IV lines, and it requires that the medical personnel be qualified with the appropriate training, education, and experience to perform the IV placement procedure determined to be most appropriate.

The protocol requires medical personnel to confirm that the IV lines are working properly both before and during the procedure and to attach and monitor an electrocardiograph during the execution procedure. Medical personnel must supervise the injection of the contents of the syringes by department employees. Before the second and third chemicals are injected, medical personnel must examine the prisoner physically to confirm that he is unconscious using standard clinical techniques and must inspect the catheter site again. The second and third chemicals are injected only after confirmation that the prisoner is unconscious and after a period of at least three minutes has elapsed from the first injection of thiopental. The protocol also requires accurate documentation of the chemicals given, the order in which they were given, and the quantities of chemicals used and discarded. Any deviations from the written protocol must be promptly reported to the department director.

The district court concluded that the State's written protocol, while an improvement over the unwritten procedure, was still constitutionally deficient. The court ordered the State to modify its proposal as follows: 1) the written protocol must require the participation of a physician with training in the administration of anesthesia and must prohibit Dr. Doe I from participating in the lethal injection process, (2) the written protocol must provide for the purchase of additional equipment to adequately monitor

anesthetic depth, (3) the written protocol's record-keeping procedures must comply with specific requirements set forth by the court, (4) the protocol must provide for court review of any deviation from it, and (5) the written protocol may not be implemented by medical personnel such as paramedics or EMTs unless they are employed by the supervising physician.

Our independent review of the State's written protocol and the record in this case leads us to the conclusion that the written protocol does not violate the Eighth Amendment, and thus, the district court had no basis on which to impose an equitable remedy requiring further modification of the protocol. The concerns that the district court noted and required to be modified do not rise to the level of creating a constitutionally significant risk of pain.

The experts agree that if a 5-gram dose of thiopental is successfully delivered, there is virtually no risk that an inmate will suffer pain through Missouri's three-chemical sequence. The experts also agree that a properly functioning IV, even peripherally placed, will adequately deliver the dose and that the inmate will then be sufficiently unconscious in less than two minutes, without the need of any further monitoring. The written protocol requires a 5-gram dose of thiopental and a three-minute wait before injecting the final two chemicals. The written protocol sufficiently provides for proper delivery of that dose by requiring the IV insertions to be accomplished by medical personnel (a physician, nurse, or EMT) who is qualified to perform the task, who must confirm before the procedure begins that the IV is functioning properly and not obstructed, and who must inspect the site again before the final two chemicals are injected. The physician, nurse, or EMT is given discretion only with regard to determining the proper placement of the IV and the appropriate procedure for insertion of the IV. The

physician, nurse, or EMT is required to examine the prisoner physically using standard clinical techniques to determine that he is unconscious before the second and third chemicals are administered.

Because of the pain that undoubtedly would be inflicted by the third chemical if administered without adequate anesthetization, it is imperative for the State to employ personnel who are properly trained to competently carry out each medical step of the procedure. The protocol adequately requires trained medical personnel to carry out these steps and to verify that the IV is working properly. The protocol provides no opportunity for personal judgment regarding the proper dose, because the protocol mandates a dose large enough to render anyone deeply unconscious, as long as it is delivered properly. The protocol is designed to ensure a quick, indeed a painless, death, and thus there is no need for the continuing careful, watchful eye of an anesthesiologist or one trained in anesthesiology, whose responsibility in a hospital's surgery suite (as opposed to an execution chamber) is to ensure that the patient will wake up at the end of the procedure. "For exceedingly practical reasons, no State can carry out an execution in the same manner that a hospital monitors an operation." *Workman v. Bredesen*, No. 07-5562, 2007 WL 1311330, at *12 (6th Cir. May 7, 2007), cert. denied, 127 S. Ct. 2160 (May 8, 2007). Absent some specific disqualifying characteristic of the chosen medical personnel, we would be hard pressed to say that a physician, a trained nurse, or a licensed pharmacist is not qualified to mix the chemicals. We know of no decision holding that the Constitution requires a physician to become the executioner. *See generally id.* at *12 (stating that the Constitution does not require the State to hire an anesthesiologist for each execution); *McKenzie v. Day*, 57 F.3d 1461, 1469 (9th Cir.), *cert. denied*, 514 U.S. 1104 (1995) (stating, "we are aware of no authority for the

proposition that the prisoner is entitled, for example, to have a lethal injection administered by a physician").

Neither does the record justify requiring the continuous monitoring of the anesthetic depth of the inmate by one trained in anesthesia or by additional equipment. The written protocol requires a 5-gram dose of thiopental to be delivered through a properly placed and working IV, combined with a three-minute wait and a physical confirmation of unconsciousness before the last two chemicals are administered. The experts agree that this dose, successfully delivered, will cause burst suppression in less than three minutes and last at least 45 minutes, which eliminates any need for further monitoring. Given the dose of thiopental provided in the protocol, the precautions taken to ensure it is successfully delivered, the three-minute wait built into the protocol before administration of the second and third chemicals, the ready availability of syringes containing an additional five grams of thiopental, and the physical examination of the prisoner and the IV site prior to administering the second and third chemicals, there simply is no realistic need for further monitoring of anesthetic depth by a physician or sophisticated equipment to prevent a constitutionally significant risk of pain.

The Constitution does not require the use of execution procedures that may be medically optimal in clinical contexts. *See Hamilton v. Jones*, 472 F.3d 814, 816 (10th Cir.), cert. denied, 127 S. Ct. 1054 (2007). "The state has broad discretion to determine the procedures for conducting an execution...." *McKenzie*, 57 F.3d at 1469. "[W]e recognize that what could be done to update or even improve the protocol is not the appropriate legal inquiry to be undertaken by this or any other reviewing court." *Abdur'rahman*, 181 S.W.3d at 309. Where the "procedures are reasonably calculated to ensure a swift, painless death,"

they are "immune from constitutional attack," *McKenzie*, 57 F.3d at 1469, as the Constitution protects only against the wanton and unnecessary infliction of pain. What the Sixth Circuit said about the Tennessee protocol is equally true about Missouri's: "The whole point of the [Missouri] lethal-injection protocol is to avoid the needless infliction of pain, not to cause it." *Workman*, 2007 WL 1311330, at *9. The State's written protocol does not present any substantial foreseeable risk that the inmate will suffer the unnecessary or wanton infliction of pain. The abundant dose of thiopental, lethal in itself and over 17 times that given for surgeries, combined with built-in checks to ensure that the IV is properly placed by medical personnel trained for the procedure and that the IV is working and not obstructed, renders any risk of pain far too remote to be constitutionally significant. *See id.* at *12 (noting that the risks of pain in a similar protocol "remain remote []and do not occur when the procedure is properly implemented"); *Hamilton*, 472 F.3d at 816-17 (noting that the risk involved must be of constitutional magnitude; and denying an injunction upon concluding that the district court correctly determined, in light of the precautions built into Oklahoma's protocol, that the risk of failure to monitor resulting in the alleged pain is far too remote to rise to a constitutional level).

We emphasize that Mr. Taylor has not adduced evidence at any stage of this litigation that carries his burden of proving a constitutional violation. We have very carefully examined the entire record, and we find no evidence to indicate that any of the last six inmates executed suffered any unnecessary pain that would rise to an Eighth Amendment violation or that any state actor was deliberately indifferent to the Constitution's requirement that no unnecessary pain be wantonly inflicted during the execution process.

III.

We conclude that Missouri's written lethal injection protocol does not violate the Eighth Amendment. The judgment of the district court is reversed, and the injunction the district court issued is vacated.

---

**Appendix B**

**UNITED STATES COURT OF APPEALS**
**FOR THE EIGHTH CIRCUIT**

**NO: 06-3651**

**MICHAEL ANTHONY TAYLOR,**

**APPELLEE**

**V.**

**LARRY CRAWFORD, DIRECTOR, MISSOURI DEPARTMENT OF CORRECTIONS AND JAMES D. PURKETT, SUPERINTENDENT, EASTERN RECEPTION DIAGNOSTIC & CORRECTIONAL CENTER,**

**APPELLANTS**

---

**Appeal from U.S. District Court for the Western District of Missouri - Jefferson City**
**(2:05-cv-04173-FJG)**

---

**JUDGMENT**

This appeal from the United States District Court was submitted on the record of the district court, briefs of the parties and was argued by counsel.

After consideration, it is hereby ordered and adjudged that the judgment of the district court in this cause is reversed

and the injunction the district court issued is vacated in accordance with the opinion of this court.

June 04, 2007

Order Entered in Accordance with Opinion:
Clerk, U.S. Court of Appeals, Eighth Circuit.

/s/ Michael E. Gans
Michael E. Gans

Appendix C

IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MISSOURI
CENTRAL DIVISION

MICHAEL ANTHONY TAYLOR

Plaintiff,

vs. No. 05-4173-CV-C-FJG

LARRY CRAWFORD, et al.,

Defendants.

ORDER

## I. BACKGROUND

Plaintiff filed his Complaint on June 3, 2005, and an amended complaint on September 12, 2005 (Doc. #36)[1]. In his First Amended Complaint plaintiff sought a declaratory judgment that Missouri's method of execution by lethal injection violates the Eighth, Thirteenth and Fourteenth Amendments because it would inflict on him cruel and unusual punishment, would deprive him of life, liberty or property without due process of law and would inflict upon him a badge of slavery, in that the three drug sequence using a procedure whereby the drugs are administered through the femoral artery creates a foreseeable risk of the infliction of

[1] Richard Clay was previously granted leave to intervene in this action. On January 30, 2006, the Court orally granted Mr. Clay's Motion to Dismiss this action as to him without prejudice. Reginald Clemons also had a pending Motion for Leave to Intervene in this action. He has now also moved to withdraw from this action.

gratuitous pain. Plaintiff also argued that the physician's role in the execution violated medical ethics. On December 28, 2005, the Court issued an Order denying defendant's Motion to Dismiss and ruling that the case presented factual issues which would likely be resolved by either a motion for summary judgment or through a hearing (Doc. # 54). On January 3, 2006, the defendants notified the Court that the Supreme Court of Missouri had set plaintiff's execution date for February 1, 2006. On January 18, 2006, plaintiff filed an Application for a Court Order requesting that the Court issue an Order directing that Taylor not be executed until further order of the Court to be issued within a reasonable time after a hearing on the merits which was scheduled for February 21, 2006. On January 19, 2006, Judge Scott Wright issued an Order staying the execution until the Court could conduct the hearing (Doc. # 62). The same day, defendants appealed Judge Wright's ruling to the Eighth Circuit. On January 29, 2006, the Eighth Circuit entered an Order reversing and vacating Judge Wright's January 19, 2006 Order. The Eighth Circuit remanded the case to the Western District and directed that the Court reassign the case to another judge for an immediate hearing. The Eighth Circuit directed that an Order be issued no later than 12:00 Noon on Wednesday, February 1, 2006. This case was assigned to this Court on Monday, January 30, 2006.

On January 30-31, 2006, this Court conducted a telephonic hearing regarding plaintiff's Complaint. During the telephonic hearing, the Court heard the testimony of the following individuals: Dr. Mark Dershwitz, Dr. Jonathan I. Groner, Dr. Mark Heath and Terry W. Moore, the Director of Adult Institutions for the Missouri Department of Corrections. Plaintiff requested that the State produce John Doe Numbers One and Two (the doctor and the nurse who participated in the most recent execution), but this request was denied. Plaintiff also sought to present the testimony of

Dr. Sri Melethil, a pharmacokineticist, but he was out of town and unable to appear until the morning of February 1, 2006. After considering the evidence and the testimony of these individuals, the Court determined that neither the chemicals used by the State for lethal injection nor the procedure employed to administer these injections constituted cruel or unusual punishment. The Court noted that while the plaintiff suggested a different approach to lethal injection, he had not shown that the current method used by Missouri violated the Eighth Amendment. Further the Court was not persuaded that the use of the femoral vein for the administration of the lethal injection violated applicable standards of the Eighth Amendment. The Court also did not find that Missouri physicians who are involved in administering lethal injections were violating their ethical obligations or that the procedure was violative of the Thirteenth Amendment.

Plaintiff appealed this Court's January 31, 2006 Order, arguing that he did not have sufficient time to present his arguments to the Court during the two day telephonic hearing. Plaintiff argued that this Court had abused its discretion in not allowing him to call John Doe I and II or Dr. Melethil and also erred in denying his claims. On April 27, 2006, the Eighth Circuit remanded the case to this Court to reconvene the hearing. The Eighth Circuit gave the parties thirty days to engage in some limited additional discovery and then an additional thirty days within which the hearing was to be held and for this Court to issue its Order, amending, modifying or restating the previous judgment and certifying the same to the Eighth Circuit.

The Court allowed plaintiff to conduct the following discovery: a Rule 34 inspection and videotaped tour of Missouri's execution chamber, a deposition of Larry Crawford, Director of the Missouri Department of

Corrections and document requests which pertained to the last six executions carried out by the State of Missouri. The document requests included any execution logs, records, autopsy reports, test results and analyses of post-mortem/toxicology reports. The State also provided information regarding what specialized training the physicians and nurses undergo who participate in administration of the drugs and all documents pertaining to any fall back procedures regarding vein access and the three drug sequence. The Court also allowed plaintiff to submit interrogatories to John Doe Defendants I - V. After John Doe I submitted his interrogatory responses, plaintiff again asked the Court for permission to depose him. The Court allowed plaintiff to conduct a limited anonymous deposition of John Doe I. This deposition was conducted at the Courthouse, with only the Court and counsel present. On June 12 -13, 2006 this Court continued the hearing which was begun in January 2006. During the hearing, plaintiff presented the testimony of Dr. Mark Heath, an anesthesiologist, Dr. Stephen Johnson, an expert in central line placement and femoral line placement and Dr. Thomas Henthorn, an expert in pharmokinetics. The State presented the testimony of Dr. Mark Dershwitz, an anesthesiologist, Terry Moore, Director of Adult Institutions for Department of Corrections and Larry Crawford, Director of the Department of Corrections.

## II. DISCUSSION

### A. Standard

The Eighth Amendment provides that "cruel and unusual punishment" shall not be inflicted. It prohibits punishments that are "incompatible with the 'evolving standards of decency that mark the progress of a maturing society.'" *Estelle v. Gamble*, 429 U.S. 97, 102, 97 S.Ct. 285, 290, 50 L.Ed.2d 251 (1976), (quoting *Trop v. Dulles*, 356

U.S. 86, 101, 78 S.Ct. 590, 598, 2 L.Ed.2d 630 (1958)). As to executions, it prohibits "the unnecessary and wanton infliction of pain" as well as methods involving torture or a lingering death. *See Gregg v. Georgia*, 428 U.S. 153, 173, 96 S.Ct. 2909, 2925, 49 L.Ed.2d 859 (1976). "The cruelty against which the Constitution protects a convicted man is cruelty *inherent in the method of punishment*, not the necessary suffering involved in any method employed to extinguish life humanely." *Louisiana ex rel. Francis v. Resweber*, 329 U.S. 459, 464, 67 S.Ct. 374, 376, 91 L.Ed. 422 (1947)(emphasis added). Additionally, as the Court noted in *Campbell v. Wood*, 18 F.3d 662, 687 (9th Cir. 1994), "[t]he risk of accident cannot and need not be eliminated from the execution process in order to survive constitutional review."

**B. Missouri's Execution Procedure**

During the January 30-31, 2006 hearing, Terry Moore, Director of Adult Institutions for the Missouri Department of Corrections, described what he believed was the execution procedure used in Missouri. Mr. Moore testified that three drugs are administered by a board certified physician. The physician first administers five grams of sodium pentothal, also known as thiopental, which is a substance that produces anesthesia. Thereafter, the physician administers a syringe of saline to flush the IV line. Next, the physician administers pancuronium bromide, also referred to as pancuronium. This drug is a paralytic agent which prevents any involuntary movement of the body. The physician then again administers the saline solution. Finally, the third drug which is administered is potassium chloride, which is a drug which stops the electrical activity of the heart. There was no dispute that if an inmate is not sufficiently anesthetized when the potassium chloride is administered, it will cause excruciating pain as it is

administered through the inmate's veins. The inmate, however, would be unable to show that he was experiencing discomfort due to the paralyzing effects of the pancuronium bromide.

After the Eighth Circuit remanded this case, the Court allowed plaintiff to conduct additional limited discovery. In a letter sent to the Court on May 17, 2006, plaintiff's counsel informed the Court that new evidence in the form of chemical dispensary logs, which had recently been produced by the State, contradicted the State's previous representations regarding the amount of thiopental that is used during executions.

In response, counsel for the State confirmed in a letter sent to the Court on May 17, 2006 that 5 grams of sodium pentothal are used:

> As plaintiff correctly points out, defendants have stated consistently that 5 grams of sodium pentothal are used in executions in Missouri. Five grams are in fact used. The reference to the 2.5 grams noted in the drug log is not correct. The doctor and the nurse who have prepared the drugs for the last six executions and for plaintiff's stayed execution confirm that 5 grams has been used in the last six executions and was prepared for plaintiff's stayed execution. (Defendants are attempting to run down the source of the error in the record, and continue to do so.)

However, the next day on May 18, 2006, counsel for the State sent the Court another letter in which they acknowledge that a mistake had in fact been made regarding the representations as to the amount of thiopental administered. The letter stated in part:

> Upon further review, defendants have just determined this afternoon, contrary to previous representations, that 2.5 grams of sodium pentothal was prepared and used at the last execution (not 5 grams) and that 2.5 grams was prepared for use at the execution of plaintiff (which was stayed before the femoral IV was inserted). Defendants and their counsel apologize to the Court and the parties for providing incorrect information.

(Doc. # 121).

Upon learning of this information, the Court submitted a set of interrogatories to John Doe I[2] to answer. The Court inquired whether the lethal injection protocol was codified in any publication, policy statement or state regulation. John Doe I responded that he was not aware of the protocol being written down in any form. He stated that it was his understanding at the time of Mr. Gray's execution that he had the independent authority to change the dose based on his medical judgment. He stated that this understanding was based on past contacts with predecessors of the current Director of the Department of Corrections. When the Court asked how many times the protocol has been modified since it was put into place, John Doe I responded:

> John Doe I can recall one instance when three syringes of potassium chloride were used based on the obesity of the offender. John Doe I can recall one instance when the IV was inserted in the offender's neck instead of his femoral vein based on the damage to both of his femoral veins from drug abuse. John Doe

---

[2] Defendants have disclosed that John Doe I is the physician that mixes the drugs used during the executions.

> I is aware of one instance when a peripheral IV was used because John Doe I was unable to attend the execution. For the execution of Mr. Gray and the preparation for the execution of Mr. Taylor, John Doe I determined to use 2.5 grams of sodium pentothal. This determination occurred because of difficulty in dissolving powder, obtained from a new supplier, containing more than 2.5 grams in the liquid that could be accommodated in a syringe. The rate of infusion and the concentration of the dose ensured that 2.5 grams was more than sufficient to make the offender unconscious before administering the remaining drugs. Further, with regard to Mr. Taylor, John Doe I was aware that the dosage used in the execution of Mr. Gray was adequate.

(Response to Interrogatory No. 5, Doc. # 152).

When asked who was consulted before the dosage of thiopental was decreased, he responded that no one was consulted because he thought it was within the acceptable parameters to accomplish the goal. When questioned about his medical background, John Doe stated that although he was a board certified surgeon, he is not an anesthesiologist. The Court also allowed plaintiff to conduct an anonymous deposition of John Doe I on June 5, 2006.

When he was asked whether any part of the execution procedure was written down, John Doe I responded as follows:

A. I have never seen it. If it was, it would have been written on my recommendation.

Q. I see. Do you have any idea why it might not be written down?

A. I'm sure it's written down somewhere. If they're checking the logs of all the drugs every time we use them and recording expiration dates and number of sheets and needles that we use, I'm certain they have it written down somewhere.

Q. But in terms of the aspects of the procedure that you're responsible for, that you perform, those aren't written down, to your knowledge?

A. It might be written in there, but it would be written on by somebody observing what I was doing and using their interpretation. So if there was a written procedure that they had done I would — you know, I'm curious to see what they think I'm doing, but I don't know that they write down the individual details of how I insert an 18-gauge rather than a 22-gauge or a 14-gauge needle.

Q. I see. So people might write things down as you're doing them, but there's no guide that you follow as you're doing it?

A. Absolutely not.

Q. So you just rely on your memory?

A. Yes.

Q. And your judgment?

A. Yes.

(John Doe Depo. pp. 69-70)

During his deposition, John Doe I described how he has had to devise an improvised procedure with regard to mixing the correct dosage of thiopental:

Q. And could you take me step-by-step through that, your improvised process?

A. I'd have to see the containers because I cannot at the present time remember whether they have glass or — they are actually just two straight-walled glass bottles. One has powder in the bottom, one has liquid in the bottom, and they are designed to lock together and mix. So, I have to stick a needle through this plastic and inject my own diluents which I know will give me no more than 50 cc's for the final product, which is what I'm aiming for for the final injection.

We have encountered problems trying to mix more than three or four grams using this method, mainly because of an inert substance possibly put in by the manufacturer to prevent mis-mixing, which I know several drug companies will do. So right now the last time I saw and talked to the Director on each of these occasions saying we either need to change what we say we're dosing or we will have to go back to the original five-gram bottle that was available when we instituted this procedure. So right now we're still improvising. And he's also having me researching an alternate drug if it comes to that.

(John Doe Depo. pp. 9-10).

When John Doe I was asked why he did not initially recall why he prepared a smaller dose of thiopental, he responded:

A. . . . But I am dyslexic and so I can recall in the operating room specific facts and details of operation and function perfectly, but in terms of copying one line to another or trying to simply copy a phone number or account number I will sometimes transpose numbers even when I'm staring at the two numbers. ***So, it's not unusual for me to make mistakes***.... But I am dyslexic and that is the reason why there are inconsistencies in my testimony.

***That's why there are inconsistencies in what I call drugs. I can make these mistakes, but it's not medically crucial in the type of work I do as a surgeon.***

(John Doe Depo. pp. 24-25)(emphasis added).

In describing how the drugs are administered, John Doe I stated that, " . . .the people who do the injections are nonmedical and they're in the dark so they have a small flashlight that they're able to quickly identify the syringes, make the appropriate connections and injections, disconnect, clamp the tube, and changing the number of syringes or the order of syringes was an unnecessary risk." (John Doe Depo. p. 31).

When questioned about whether he monitors anesthetic depth, John Doe I testified as follows:

Q. Did you monitor Mr. Gray's anesthetic depth during the execution?

A. I monitor — the only thing that can be monitored is facial expression, and you can judge when the effect of the drug is accomplished, and that can be seen from across a room through a window. And when that effect occurs then I know the inmate is unconscious. . . .

Q. So you said that you can see that — an inmate's facial expression from where you stand?

A. Yes. That's the only thing any anesthesiologist uses in the course of inducing a person when pentothal was still used, was you simply started injecting, look at the face, and again, it's difficult to describe, but I can tell instantly when the pentothal has taken effect. And in medical practice the instant the pentothal has taken effect they gave absolutely no more because then they move on to the actual anesthesia which has to be started before the pentothal wears off.

(John Doe Depo. pp. 41-42).

When he was asked whether he had any discussions with Director Crawford about the scope of his authority, John Doe I stated:

A. Oh, yes. We talk — I talk in his office and at the time of the execution. In fact, he's the only director I have actually gone over to his office for other reasons and visited about this. And again, he has no background in corrections and he has no background in medicine, so the other corrections officers had long backgrounds in corrections so they were aware of what we were doing and why we were doing it. Since he has no background in either field, he reiterated that he's totally dependent on me advising him what could and should and will be done, and he will back up — if I think there's a change that needs to be made, he wants me to quickly inform him so he can make the appropriate changes.

Q. I see. So, it's your understanding that if you thought a change to the execution procedure needed to be made you would — Director Crawford would defer to your opinion?

A. Absolutely.

(John Doe Depo. pp. 63-64).

### C. Is Missouri's Execution Procedure Constitutional?

In *Morales v. Hickman*, 415 F. Supp. 2d 1037 (N.D.Cal. 2006), *aff'd*, 438 F.3d 926 (9th Cir. 2006), *cert. denied*,126 S.Ct. 1314, 163 L.Ed.2d 1148 (2006), the Court stated:

> The Eighth Amendment prohibits punishments that are incompatible with the evolving standards of decency that mark the progress of a maturing society. . . . Executions that involve the unnecessary and

> wanton infliction of pain . . . or that involve torture or a lingering death . . . are not permitted. When analyzing a particular method of execution or the implementation thereof, it is appropriate to focus on the objective evidence of the pain involved. ...In *this case, the Court must determine whether Plaintiff is subject to an unnecessary risk of unconstitutional pain or suffering such that his execution by lethal injection under California's protocol must be restrained.*

*Id.* at 1039 (internal citations and quotations omitted)(emphasis added). In that case the Court focused on the narrow issue of "whether or not there is a reasonable possibility that Plaintiff will be conscious when he is injected with pancuronium bromide or potassium chloride, and, if so, how the risk of such an occurrence may be avoided." *Id.* at 1040. This is precisely the same question which this Court must address.

After learning more about how executions are carried out in Missouri, through the interrogatories submitted to the John Doe defendants, reviewing the chemical dispensary logs, reviewing the videotape of the execution chamber and listening to the testimony of John Doe I, and to the testimony of the other expert witnesses at the June 12-13, 2006 hearing, it is apparent that there are numerous problems. For example, there is no written protocol which describes which drugs will be administered, in what amounts and defines how they will be administered. John Doe I testified that he came up with the current protocol. John Doe I also testified that he felt that he had the authority to change or modify the formula as he saw fit. It is apparent that he has changed and modified the protocol on several occasions in the past. He has reduced the amount of thiopental given from 5.0 grams to 2.5 grams

and has also changed the location on the inmate's body where the drugs were administered. It is obvious that the protocol as it currently exists is not carried out consistently and is subject to change at a moment's notice.

The Court is also concerned that John Doe I possesses total discretion for the execution protocol. Currently, there are no checks and balances or oversight, either before, during or after the lethal injection occurs. No one monitors the changes or modifications that John Doe I makes. John Doe I even testified that the Director of the Department of Corrections, Mr. Crawford, has no medical or corrections background, and that he is "totally dependent on me advising him." (John Doe Depo. p. 64).

In addition to the fact that there is no oversight and the responsibility for making changes or adjustments is completely vested in one individual, the Court also has concerns about John Doe I's qualifications. John Doe I readily admitted that he is dyslexic and that he has difficulty with numbers and oftentimes transposes numbers. John Doe I testified "it's not unusual for me to make mistakes. . . . But I am dyslexic and that is the reason why there are inconsistencies in my testimony. That's why there are inconsistencies in what I call drugs. I can make these mistakes, but it's not medically crucial in the type of work I do as a surgeon." (John Doe Depo. p. 25). The Court disagrees and is gravely concerned that a physician who is solely responsible for correctly mixing the drugs which will be responsible for humanely ending the life of condemned inmates has a condition which causes him confusion with regard to numbers. As the Court has learned, the process of mixing the three different drugs and knowing the correct amount of the drugs to dissolve in the correct amount of solution involves precise measurements and the ability to use, decipher, and not confuse numbers. Although John Doe

I does not feel this is crucial in the type of work he does as a surgeon, it is critical when one is mixing and dissolving chemicals for a lethal injection.

In addition, John Doe I testified that although he is not an anesthesiologist, he monitors the anesthetic depth of an inmate by observing the inmate's facial expression. However, as can be seen from the videotape of the execution chamber, when the inmate is lying on the gurney in the execution room, the inmate is facing away from the Operations room where John Doe I is located. Additionally, it is dark in the Operations room and there are blinds on the window which are partially closed and obstruct the view. This would make it almost impossible for John Doe I to observe the inmate's facial expression. This leads the Court to conclude that there is little or no monitoring of the inmate to ensure that he has received an adequate dose of anesthesia before the other two chemicals are administered.

All of these concerns lead the Court to conclude that Missouri's lethal injection procedure subjects condemned inmates to an unnecessary risk that they will be subject to unconstitutional pain and suffering when the lethal injection drugs are administered.

**D. Revisions to the Execution Protocol**

Having determined that Missouri's current method of administering lethal injections subjects condemned inmates to an unacceptable risk of suffering unconstitutional pain and suffering, the Court concludes that it is within its equitable powers to fashion a remedy that "preserves both the State's interest in proceeding with Plaintiff's execution and Plaintiff's constitutional right not to be subject to an undue risk of extreme pain." *Morales*, 415 F. Supp. 2d at 1046. Director Crawford testified at the hearing that the Department of Corrections is in the process of developing a directive which would establish a protocol for administering

lethal injections. However, from his testimony, it was apparent that the directive would not encompass all of the attributes which the Court finds are necessary to ensure that lethal injections are carried out humanely. Recently other courts have also faced this challenge and have modified execution procedures in those states. *See e.g. Brown v. Beck*, No. 5:06-CT-3018-H, (E.D.N.C. April 7, 2006)(Doc. No. 32) and *Morales*, 415 F. Supp. 2d at 1046.

Accordingly, the Court hereby **AMENDS** its previous order of January 31, 2006 and **ORDERS** the Department of Corrections for the State of Missouri to prepare a written protocol for the implementation of lethal injections which incorporates the following provisions:

**1. Personnel**

A board certified anesthesiologist shall be responsible for the mixing of all drugs which are used in the lethal injection process. If the anesthesiologist does not actually administer the drugs through the IV, he or she shall directly observe those individuals who do so. Additionally, the Operations Room shall be sufficiently lighted so that the corrections personnel can see which drugs are being administered.

**2. Lethal Injection Drugs & Method of Administration**

The level of thiopental administered shall not be less than 5 grams. Pancuronium Bromide and Potassium Chloride will not be administered until the anesthesiologist certifies that the inmate has achieved sufficient anesthetic depth so that the inmate will not feel any undue pain when the Potassium Chloride is injected. The State in conjunction with the anesthesiologist will have discretion to determine the most appropriate location on the inmate's body to inject the drugs. The State shall specify in the protocol how the

anesthesiologist will certify that the inmate has achieved the appropriate anesthetic depth.

**3. Monitoring**

The State will put in place procedures which will allow the anesthesiologist to adequately monitor the anesthetic depth of the inmate. This may require the State to purchase additional equipment in order to adequately monitor anesthetic depth. The State should also consider repositioning the gurney so that the inmates's face will be visible to the anesthesiologist, using a mirror, or even allowing the anesthesiologist to be present in the room with the inmate when the drugs are injected.

**4. Contingency Plan**

The State's protocol shall also contain a contingency plan in case problems develop during the execution procedure.

**5. Auditing Process**

The Department of Corrections shall put in place an auditing process which will ensure that the individuals involved in the lethal injection process are correctly following the protocol, including administering the correct dosages of the medication, in the proper order. The Court contemplates that the State will consult with a board certified anesthesiologist in designing the auditing process.

**6. Changes to the Lethal Injection Procedure**

After approval by the Court, no further changes shall be made to the lethal injection protocol without seeking the prior approval of this Court. This Order contemplates consultation with a board certified anesthesiologist in arriving at a proposed written protocol. The Court will retain jurisdiction over the State's implementation of the lethal injection protocol for the next six executions or until the

Court is satisfied that the protocol is being administered in a consistent fashion. The Department of Corrections shall submit its revised lethal execution protocol to this Court for review and approval on or before **July 15, 2006**. All executions in the State of Missouri are hereby **STAYED** pending approval of the protocol.

## III. CONCLUSION

For the reasons stated above, the Court hereby **AMENDS** its January 31, 2006 Order and in accordance with the April 27, 2006 Order of the Eighth Circuit, this Court hereby **CERTIFIES** this Order to the Eighth Circuit for its review and consideration.

Date: June 26, 2006
Kansas City, Missouri

s/ FERNANDO J. GAITAN, JR.
Fernando J. Gaitan, Jr.
United States District Judge

**Appendix D**

**IN THE UNITED STATES DISTRICT COURT**
**WESTERN DISTRICT OF MISSOURI**
**CENTRAL DIVISION**

| | | |
|---|---|---|
| MICHAEL ANTHONY TAYLOR | ) | |
| | ) | |
| | ) | No. 05-4173-CV-C-FJG |
| Plaintiff, | ) | |
| vs. | ) | |
| | ) | |
| LARRY CRAWFORD, et al., | ) | |
| | ) | |
| Defendants. | | |

**ORDER**

On August 9, 2006, the Eighth Circuit remanded the above captioned case to this Court. In that Order the Eighth Circuit stated, "[s]ince Crawford has now proposed the revised protocol for use in the execution of Taylor's death sentence, the court remands jurisdiction of this dispute to the district court for consideration of this newly propounded protocol and all other issues now framed by the parties' pleadings and notices of appeal." (August 9, 2006 Order, p. 3). The Court has reviewed the protocol proposed by the State, as well as the plaintiff's objections and the state's reply to those objections.

**I. Revised Protocol**

First, this Court's June 26, 2006 Order (Doc. # 195) was premised on the stated intent of the State to continue using the three drug protocol. However, the Court found that the lack of a written protocol for the use of these three drugs, plus an inconsistent and arbitrary application of these drugs

subjected condemned inmates to an unreasonable risk of cruel and unusual punishment. The Eighth Amendment provides that "cruel and unusual punishment" shall not be inflicted. It prohibits punishments that are "incompatible with 'the evolving standards of decency that mark the progress of a maturing society.'" *Estelle v. Gamble*, 429 U.S. 97, 102, 97 S.Ct. 285, 290, 50 L.Ed.2d 251 (1976), (quoting *Trop v. Dulles*, 356 U.S. 86, 101, 78 S.Ct. 590, 598, 2 L.Ed.2d 630 (1958)). As to executions, it prohibits "the unnecessary and wanton infliction of pain" as well as methods involving torture or a lingering death. *See Gregg v. Georgia*, 428 U.S. 153, 173, 96 S.Ct. 2909, 2925, 49 L.Ed.2d 859 (1976).

While the State's revised protocol is an improvement over the previous procedures used by John Doe No. 1, it falls short of providing the critical Constitutional protections required. It was never the intention of this Court to prevent the State of Missouri from executing its death row inmates. Rather, the Court sought only to ensure that the State was meeting Constitutional standards. Those standards can be achieved in various ways. However, certain protocols suggested by the State fall short of those standards. If the State wants to continue using the three drug method of lethal injection, its proposal shall be modified as follows:

1. First, John Doe No. 1 shall not participate in any manner, at any level, in the State of Missouri's lethal injection process.

2. Second, while a board certified anesthesiologist is preferred, the Court hereby modifies its previous order (Doc. # 195, p. 14) to permit a physician with training in the application and administration of anesthesia to either mix the chemicals or to oversee the mixing of the chemicals for lethal injections.

3. Anesthetic Depth - The States' proposal is rejected in favor of that proposed by the Court. As noted in the Court's previous order, the State may have to purchase additional equipment in order to adequately monitor anesthetic depth. The method of monitoring anesthetic depth shall be determined after the State consults with the physician who is chosen to assist in the lethal injection process. The State has agreed to reposition the gurney on which the inmate is positioned, so that the inmate's face will be directly visible to the medical personnel.

4. Contingency Plan - The State's proposed contingency plan is acceptable.

5. Auditing Process - The "Sequence of Chemicals" form that verifies that the drugs were given in the order specified in the protocol shall be signed by each staff member taking part in the protocol as soon as the inmate has been declared dead. The physician in charge of the lethal injection procedure will also complete and sign the chemical log.

6. Any deviations from this written protocol shall be a matter of written record submitted to the appropriate state officials and subject to Court review. Said review may result in further modifications of the approved protocol.

7. Obtaining Use of a Board Certified Anesthesiologist - this provision has been modified to allow a physician trained in the administration and application of anesthetic drugs to be involved. The State's proposed use of "medical personnel" is rejected to the extent they propose the use of paramedics and/or emergency medical technicians. However, the supervising physician previously referred to may employ medical personnel whom he or she believes are necessary to assist the physician.

8. The State shall submit a revised protocol to the Court for review and approval on or before **October 27, 2006.** The State shall select a physician who is in good standing with their State's licensing board. The physician selected shall not have any disciplinary action taken against them by their State's licensing authority.

**II. Motion to Withdraw**

Also pending before the Court is a Motion to Withdraw and Motion for Appointment of Successor Counsel. This motion was filed in the Eighth Circuit, but was remanded to this Court on August 9, 2006. Mr. Simon moves to withdraw as counsel for plaintiff because he has accepted a position with the Missouri State Public Defender System. Co-counsel in plaintiff's habeas corpus and executive clemency representation, Mark Thornhill, will continue representing plaintiff in his clemency proceedings and Jenner & Block, LLP will continue to represent plaintiff in his lethal injection litigation. Plaintiff has filed an affidavit requesting that the Court appoint C. John Pleban, to succeed Mr. Simon in the habeas corpus and executive clemency litigation. As plaintiff has adequate counsel which are continuing to represent him, the Court finds it unnecessary to appoint replacement counsel. Accordingly, Mr. Simon's Motion to Withdraw is hereby **GRANTED** and the Motion to Appoint Replacement Counsel is hereby **DENIED**.

Date: Sept 12, 2006
Kansas City, Missouri

s/ FERNANDO J. GAITAN, JR.
Fernando J. Gaitan, Jr.
United States District Judge

**Appendix E**

**UNITED STATES COURT OF APPEALS**
**FOR THE EIGHTH CIRCUIT**

**No: 06-3651**
**Michael Anthony Taylor,**
**Appellee**
**v.**
**Larry Crawford, Director, Missouri Department of Corrections and James D. Purkett, Superintendent, Eastern Reception Diagnostic & Correctional Center,**

**Appellants**

---

Appeal from U.S. District Court for the Western District of Missouri - Jefferson City
(2:05-cv-04173-FJG)

---

**ORDER**

The petition for rehearing en banc is denied. The petition for rehearing by the panel is also denied.

Judge Benton did not participate in the consideration or decision of this matter.

August 07, 2007

Order Entered at the Direction of the Court: Clerk, U.S. Court of Appeals, Eighth Circuit.

/s/ Michael E. Gans
Michael E. Gans

## Appendix F

Constitutional Provision Involved

U.S. Const. amend. VIII

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

**Appendix G**

**IN THE UNITED STATES DISTRICT COURT**
**WESTERN DISTRICT OF MISSOURI**
**WESTERN DIVISION**

| | | |
|---|---|---|
| MICHAEL TAYLOR, | ) | Case No. |
| Plaintiff, | ) | 05-4173-CV-S-FJG |
| vs. | ) | |
| | ) | |
| LARRY CRAWFORD, et al., | ) | |

TRANSCRIPT OF TESTIMONY OF JOHN DOE NO. 1

On Monday, June 5, 2006, the above-entitled cause came on before the Honorable Fernando J. Gaitan, Jr., U.S. District Judge, sitting in Kansas City, Missouri.

APPEARANCES

For the Plaintiff: MS. GINGER D. ANDERS
Jenner & Block, LLP
601 13th Street NW
Suite 1200 South
Washington, DC 20005

For the Defendants: MR. MICHAEL PRITCHETT
Missouri Attorney General's Office
P.O. Box 899
Jefferson City, MO 65102

Donna M. Turner RMR
U.S. Court Reporter, Room 7552
Charles Evans Whittaker Courthouse

400 East Ninth Street
Kansas City, MO 64106 (816) 512-5641

JOHN DOE NO. 1

Direct Examination by Ms. Anders 4
Cross-examination by Mr. Pritchett 96
Redirect Examination by Ms. Anders 104
Recross-examination by Mr. Pritchett 108

* * * *

Page 8

* * * *

Q So I'd like you to take me step-by-step through the process by which you mix thiopental solution for an execution.
A Okay. What, where --
Q Just start at the beginning, assuming, since I have no medical background I need a pretty basic explanation.
A Last year, ten years ago, thirty years ago?
Q The general process you have used for recent

Page 9

executions and just how you'd instruct somebody if they were going to do an execution in the near future.
A Oh, well, we were discussing this because pentothal currently comes in a container that allows only the container to be inserted into itself and mixed with a specific volume. In order to demonstrate this to the court we tried to locate the specific container. There is not a single hospital, surgery center, or ambulance literally in the state that still carries pentothal.
So what we were using is a formulary dose that was provided by the drug company to allow the hospital to

bill individually to patients rather than using the large multi-dose vial. It's not designed to be removed from its container. So currently I have devised a method to mix the pentothal with an improvised technique that allows me to insert sufficient pentothal into one syringe so that a nonmedical person can inject it in the dark.

Q And could you take me step-by-step through that, your improvised process?

A I'd have to see the containers because I cannot at the present time remember whether they have glass or - they are actually just two straight-walled glass bottles. One has powder in the bottom, one has liquid in the bottom, and they are designed to lock together and mix. So I have to stick a needle through this plastic and inject my own

Page 10

diluents which I know will give me no more than 50 cc's for the final product, which is what I'm aiming for for the final injection.

We have encountered problems trying to mix more than three or four grams using this method, mainly because of an inert substance possibly put in by the manufacturer to prevent mis-mixing, which I know several drug companies will do. So right now the last time I saw and talked to the Director on each of these occasions saying we either need to change what we say we're dosing or we will have to go back to the original five-gram bottle that was available when we instituted this procedure. So right now we're still improvising. And he's also having me researching an alternate drug if it comes to that.

Pentothal was chosen originally by the engineer that designed the machine because it is a long-standing drug. Every physician was familiar with it. It was available all over the United States and it was not going

to be recalled off the market for any reason so it was going to be available for a long time. All the drugs were chosen on that criteria rather than some exotic -- and again, it was done by an engineer, not by medical personnel. We simply went along with its choices because it made sense.

Q Okay. So let me step back for one moment, because I

Page 11

don't have very much background in this. In previous executions when you are preparing a dose of five grams of thiopental, how did you accomplish that? How did you mix it?

A The thiopentothal five-gram bottle is about the size of a Coke bottle and it was designed for the anesthesiologist to arrive at work in the morning, fill this Coke bottle with five grams of pentothal and use 200 to 500 milligrams per patient for every anesthetic that she gave that day. At the end of the day she could put it in the refrigerator with her name and label and use it the next day.

The hospital didn't like this because it allowed for poor control. Left the drug out and so the hospitals have gone to this 500-milligram unit dose bottle so they can bill patients individually. And so they sign out a specific drug to a specific patient and there's no extra left over. And that's basically what -- the economics of the medical use.

Q I'm sorry, I'm having a little bit of trouble following. So did -- have you given five grams of thiopental, prepared five grams for an execution since the vial size was reduced to 500 milligrams?

A No. And we only used five grams because that's the size of the bottle. Because the DEA requires a separate

Page 12

disposal log of any drug not used and we would have to create disposal records of drugs we didn't use, so we simply use the five grams because that's how it was supplied.

Q I see.

A If it had been a four-gram bottle we would have been using four grams. The original protocol called for one gram, and from my experience doing surgery inside prison facilities, I was quite aware that one gram in chronic drug addicts was an insufficient dose to ensure that they would be sedated. So -- but a two-gram dose would cover 99 percent of all drug addicts and inmates. So we arrived -- initially with the injection machine I specified that it had to be changed to two grams because the one gram could be insufficient in some cases.

Q Okay. Thank you. I'm just going to introduce another exhibit now.

Have you seen this before, Doctor, this document?

A This is a page taken from the log that was kept by the prison.

Q Is this -- this reports the chemicals that are used and disposed and their amounts in each execution; is that correct?

A It's, I would have to say, an approximation, yes. It's the -- the only thing that is significant on this as

Page 13

far as I'm concerned is the amount of pentothal that is used or disposed of. Potassium and pancuronium are not a controlled substance. The DEA does not care what we do with it, but they do want to see if we have a record of

pentothal used and pentothal disposed, and that's all it's for.
Q I see. Thank you. If you could turn -- this has two pages on it, right?
A Yes.
Q If you could turn to what is the back page, the lower page, and if you would just look with me at the entry that's dated 3/16. It says Stanley Hall on it.
A Yes.
Q And there does it say -- how much does it record under the amount column for sodium pentothal?
A It says five grams.
Q And under the vial column?
A It says ten.
Q So I guess I'm still having trouble following. So five grams were given to Stanley Hall; is that correct?
A It shows to be that five grams were taken out of the cabinet. Whether we were able to give him the full five grams or not, this record is not supposed to show that. This is more of an inventory for the prison to keep track of drugs.

Page 14

Q I see. So you're saying that the five grams may have been checked out --
A It was checked out, and I noticed when I finally saw these records is that sometimes it would show different amounts because after we tried to deal with it, I'm sure what happened on this instance is we took ten bottles, we opened them. I was unable to mix this. We show that we gave the five grams because we have no provision for showing that we disposed of three and gave two, or disposed of two and gave three, because this has not been set up that way. We either show we used it all or disposed of it

all.
Q I see. So even though there is no indication on this form that any particular amount of pentothal was disposed of, you're saying that you may have actually used less than five grams in that --
A Yes, we may have injected less. We are still way over the amount required to accomplish what our objectives are.
Q Do you remember how much you may have given during the Stanley Hall execution?
A I don't remember specifically that, no.
Q Do you have any -- can you speculate as to how much, based on your experience in these executions?
A Well, I need to back up a little bit. When I was involved in the initial executions when the death penalty

Page 15

was instituted, we were still looking at cyanide and when the lethal injection came along, [redacted] I was -- I advised [redacted] that the doses, the rate of administration was too slow with using the injection machine. Therefore, we quickly converted to hand injection like they've always used in Texas simply because the machine cannot account for differences in flow, differences in IVs, rates of administration. All of the problems with lethal injection have nothing to do with the drugs. They have to do with the quality of the IV, its location and how fast the drugs are given. If you have a poor IV, you're going to get a poor result. All of the bad results are from poor IVs, not wrong doses of drugs.
When given two grams, 20 milligrams or so of pancuronium and 100 milliequivalents of potassium, 100 percent of people will die from those injections.
Q Okay. And just for the sake of completeness, could you look at the entry under the one we were just talking

about, which is 4/26. It says Donald Jones. Do you see that one?
A Yes.
Q And that also says that five grams were checked out of sodium pentothal?
A Yes.
Q And then the vials column, could you describe what you

Page 16

see there?
A I see a 10 and I notice now it's marked out. I would never have seen this once the execution was completed, but I know now that someone initialed and wrote in that eight had been used because apparently they checked the inventory and based on their inventory, so we may have taken ten out and put two back is the only thing I can speculate on that.
Q And do you remember how much sodium pentothal you actually prepared for that execution?
A It could not have been over four grams, but whoever wrote that in the log, and I can assure you that is not my writing, said that I gave five grams. But again, I don't know who wrote that in this log.
Q I see. Thank you. And then on the first page of this log, I guess the top page, for 5/17/05, Vernon Brown, would your testimony be the same, that five grams was checked out but that's not necessarily how much --
A It shows five -- ten vials were checked out and ten vials confirmed at inventory, so for some reason the ten vials were either used or disposed of in this case.
Q I see. But do you remember whether you injected five grams or not, or prepared five grams?
A Specifically in this instance, no, I do not remember.
Q But based on your previous testimony, do you think it would have been less than five grams?

Page 17

A It could have been less than five grams. My objective though is still trying to -- again, the amount is not nearly so important as the speed, route, concentration, body weight, body fat. There are many, many other factors. Pre-medication. All of these have much -- as much or more effect as this total dose does.
Q I see. Thank you. So then if you could just take me down to the next entry. I guess it's the entry after the next one. 5/30 or 6/30.
A Yes.
Q So if you could just explain to me here. It looks to me it says five grams under the amount and then under vials it says six.
A That shows six, yes.
Q So that means that six vials were taken out?
A Six vials were confirmed at inventory.
Q And what dose is six vials?
A Under this system -- again, we have had several different drugs. We have had different doses of pancuronium. We definitely have had different concentrations of potassium. So I don't know at what point -- I'm dealing with what I see at the time and what I'm required to mix to get this to work. So whether that was a different manufacturer or whether we still had the 500 milligram -- it's my best recollection we had a similar

Page 18

type of 500 milligram vial to work with at that time.
Q I see. And that's a pretty standard vial size; is that correct?
A Until we get a different size, yes.

Q Okay.
A Right now nobody is using it, so I don't know if we're going to have this available, but we are going to make attempts to get that or some other size that we can work with.
Q Okay. So if you could just -- if we could just go back to the Gray execution which we have been talking about in this case as an execution in which you prepared five grams of thiopental.
A Which date was that?
Q That was on 10/26/05. That's the second to the last entry in the chemical log. I was just going to ask you a few questions about it.
A Yes.
Q Are you aware that your counsel represented to this court on May 17th that five grams of thiopental had been prepared and given for each execution, including Mr. Gray's?
A He may have.
Q Assuming that he made that representation, was that accurate?

Page 19

A By seeing this log, it probably was not accurate.
Q Do you have any idea why he may have made that representation at the time?
A I can give you a very good reason.
Q What is that?
A Well, when I was requested to come back and get involved with the execution process, my main objective was and I was charged by the Director, they had had a very difficult execution in which the inmate took approximately 25, 30 minutes to expire which caused a flurry in the press and embarrassment to the prison. And my job as a surgeon

was to ensure that they had an adequate IV.

Secondarily, I was also involved in adjusting the doses and keeping -- making sure that these personnel were able to give the doses rapidly in the dark by nonmedical personnel. So my objectives were to keep the syringes consistent, the labeling consistent, and the timing consistent, which is very, very important.

And in that process I was more concentrating on how and why the drugs work, because we really had nothing to go by. If you go back in the history of executions, the hangman had to refer to a chart for size of rope, length of drop, weight of inmate to determine whether a hanging was accomplished. So since there was no other source, and I was the only physician involved in any executions, I think

Page 20

it fell to me to determine if we were doing an adequate job.

So under this protocol that I devised for nonmedical people to do the injecting, we would inject the first syringe of pentothal and the inmate would be unconscious in 15 seconds with no cardiovascular depression.

He would then give the pancuronium, which requires the heart to still be beating and it has to circulate for at least one minute, which is the time a nonmedical person has to change syringes. As this circulates, it paralyzes all voluntary muscles. If you give it too quick or your timing is off, you're not going to get the right effect.

Then the two vials, the two ampules of -- or two syringes of potassium chloride were sufficient for a person under 300 pounds to stop cardiac activity. Otherwise, you have to wait 15 minutes for cardiac activity. But the

person will be paralyzed in 15 seconds as the dose goes in and the effective heart beat will stop within 15 seconds. We wait another minute or two so all electrical activity is stopped so no one will question.

So my concern is to follow that type of schedule, so I am -- and I'm quite aware in other jurisdictions that they would -- they can't get the five gram and they have

Page 21

also used two grams, and I knew and was figuring at that point in time that a five-gram dose might be criticized as being excessive. I knew it wasn't, but again this being reviewed by nonmedical personnel who would look for any reason to criticize. So I was totally comfortable with -- especially when we're dealing with this difficult drug, to say -- and by 10/26 I said get out five, I'll give 2.5, and again observed that within 15 seconds the patient was -- the inmate was unconscious, and there was absolutely no change in the timing.

My main objection is, my obligation to the director is, he is able to go out and does not have to explain to the press why did this happen, why didn't this happen. As long as protocol is followed, death has occurred within two to three minutes 100 percent of the time and the witnesses are totally unaware even when and how the injections are given. There is no reaction. There's no grimacing. There's no writhing. There's no pain. There's no feeling whatsoever. It is a very calm procedure. And that's what I'm trying to maintain.

Q Okay. Let me just unpack a few things in that answer. Let me just go back for my benefit. So I think you testified that the DOC requested that you come back after a particular execution; is that correct?

A Yes.

Page 22

Q And what was the reason for that?
A The inmate was a drug addict and they could not get an IV line in. They finally put the needle in his thumb, and you cannot give these drugs through the thumb and get the result you expect, so it was a prolonged execution which caused a lot of embarrassment and it should not have happened.
Q Do you remember which execution that was?
A I do not. I was not there.
Q About what year was that?
A At least ten years ago, possibly.
Q And I think you also stated that you devised the current procedure as it has to do in the past ten years or so since your participation?
A Again, I was the only physician available anywhere to ask about how and what. No one has any experience with this drug and currently no one has experience with these drugs anymore simply because other drugs are currently being used, so I have to be the authority, I guess.

* * * *

Q I see. So you came up with the current procedure?
A Yes, I did.
Q Did you consult anybody in the course of doing that?
A I just said no one else knows anything about this.

Page 23

Q Okay. Thank you. And so when you devised the procedure, I think you said that your goal was to have death occur quickly and very --
A Painlessly. With no apparent suffering that the public can observe, which they will make the most of.

Q I see. Thank you.
So I think you also said that it has been a relatively -- strike that. I'm sorry. I think you testified that since the vial size of thiopental has changed to 500 milligrams it has been consistent that you haven't mixed five grams and haven't -- and five grams hasn't been injected; is that correct?
A The total dose to me was insignificant. My focus was on the objective of making it -- and if you look at the times of injection and time of -- the amount -- the timing of the injections and the time that death occurred, there is no visible difference in any of these. You cannot tell from the dose given.
Q I see.
A There's no way to tell.
Q Sure. Could you look, please, at your answers to the first set of interrogatories. It's on page 24. This is Interrogatory No. 63.
A Page 24.
Q Your answer there is at the bottom of the page. And

Page 24

could you just read that answer for me.
A "John Doe 1 states that this entry means that 2.5 grams of sodium pentothal was prepared and administered at this execution. John Doe 1 adds that he/she did not initially recall having prepared a smaller dose of sodium pentothal than usual at this execution. John Doe 1 states upon further thought and review of the drug log that he/she recalls that he/she prepared a smaller dose because it comes to his/her attention that other jurisdictions considered a dose of sodium pentothal as large as five grams to be larger than necessary and John Doe 1, based on his/her medical judgment concluded 2.5 grams of sodium

pentothal w[illegible]ore than adequate."
Q So you stated here that you initially did not recall that you prepared a smaller dose; is that correct?
A Yes.
Q Was that accurate at the time that this was written?
A Yes.
Q Okay. Do you have any idea why you might not have recalled initially that you prepared a smaller dose, given that it was relatively consistent that you prepared a smaller dose than five grams?
A I can save you a whole lot of time and offer my apologies to the court, but last night I was trying to pay my cable bill and I had two hours. I realized I had copied

Page 25

my account number by dropping one digit and transposing two. In surgery, that's not important. But I am dyslexic and so I can recall in the operating room specific facts and details of operation and function perfectly, but in terms of copying one line to another or trying to simply copy a phone number or account number I will sometimes transpose numbers even when I'm staring at the two numbers. So it's not unusual for me to make mistakes.

But in the operating room where I have no notes, no letters, just my mental files which are extensive, this -- and I am capable of doing 20 to 25 operations a day when I go on these medical missions, without any errors. But I am dyslexic and that is the reason why there are inconsistencies in my testimony. That's why there are inconsistencies in what I call drugs. I can make these mistakes, but it's not medically crucial in the type of work I do as a surgeon.
Q Okay. Thank you. I'm just trying to get it all straight for --

A Well, I may contradict myself again.
Q I understand. We all do sometimes. So looking at this answer again, it states that you prepared only 2.5 grams because it had come to your attention that other jurisdictions considered a dose of sodium pentothal as large as five grams to be larger than necessary and based

Page 26

on your medical judgment you concluded that 2.5 grams was more than adequate. Is that correct?
A All other jurisdictions use two grams, period.
Q And what is the source on which you base that?
A Direct communication with states involved in executions.
Q Have you communicated with California?
A Yes.
Q I think California uses five, or used, but I could be wrong on that.
A No. I just talked to them a month ago when they had this fiasco.
Q If I could just ask what you meant by necessary in this answer, when you said larger than necessary.
A It's adequate, but excessive dose has no bad effects. I mean, I could possibly give as much as ten grams, that would really be over-kill but it would not really -- the drug was chosen because it doesn't cause cardiac vascular depression so it means you can give a lot of it and your heart will still beat fine. So that's why this drug was given because the muscle relaxant requires heart beat and blood pressure to be effective. If you gave a drug that had a chance of stopping the heart beating, of course you expect that at an execution, but then you could not give the muscle relaxant and the other drugs because they

Page 27

require a heart beat to circulate and be effective.
Q When you said 2.5 grams was adequate, you mean adequate to cause unconsciousness?
A One gram will cause 90 percent of the population to be unconscious. The extra gram is for that small percentage of drug addicts that had excessive drug use, they produce enzymes in the liver that allows them to metabolize pentothal at a much more rapid rate.

The problem with all of these drugs is if you give the dose and you do not get the effect you need, you cannot simply add more drug to get the dose. You must repeat the entire dose. So if you had chosen a two-gram dose just theoretically, and you gave it and a person did not become unconscious, rather than giving another 500 milligrams, most likely you would have to give another full two-gram dose. So we have -- I had to adjust the doses to guarantee that we would not have to redose anybody. So that's as much a reason why these numbers were chosen.
Q I see. I'm sorry. And if you gave two grams initially why would you then have to give another full two grams after that?
A That's the way all drugs work. You can't simply add more to it to get what you want. You must repeat the entire dose because the body -- as far as the body is concerned, that drug is completely gone. If that person,

Page 28

you gave him two grams and he's awake, there is no pentothal circulating in his body, so you must give another full two grams or more if you want an effect. You can't simply add to the dose you have given. It doesn't accumulate.

Q I see. And then do you recall that in interrogatory answer submitted on May 25th, these were in response to the court's interrogatories, you stated that you had prepared only 2.5 grams because you had difficulty dissolving more than 2.5 grams?
A Upon seeing the drug log and inventory, yeah, then I did remember. But I have a lot of other things I'm involved with and busy with and doing out of the country long periods of time. So, yes. And one of the problems with being dyslexic is you have to be confident in what you're doing at the time, so I was fairly confident that I had mixed five grams. Then when I saw the drug log and the inventory, obviously that is when I made the change. But at that point in time I could remember the details of what was involved in that and how I had to try to mix it. But for the most part I would have answered five grams had I not seen the log and the inventory and realized they were inventory of what was left.
Q Okay. Thank you. So just going back to the Gray execution once again. So you encountered a problem during

Page 29

the mixing process.
A As soon as they went to the ten vials, yes. I go to the execution chamber and we're on a time frame. I have minutes to get the drugs ready, minutes to ensure a perfect IV. There's no time to call the drug company at midnight, the Director or nursing staff to change. I am required to deal with what I am given and make it come out right and make this -- make it happen I guess is best way to say it. And since, when I analyzed what I was dealing with, I had more than enough to make everything happen according to what they were expecting to happen so there was no reason to break protocol or call a delay or call the Director or

something because he was counting on me to keep my end -- do my part and there was nothing in there that I saw that I couldn't do it. I was able to modify what I was given and he was totally unaware that there was any change in dosage, because the timing was exactly the same. And he's almost to the point of counting on this predictability and the reliability of our method.

Q So how much pentothal did you set out to mix for the Gray execution?

A Independently I don't remember. All I have is this log of the person that says it came back in inventory. And again, to me, that was not as important as the fact that I had enough to effect a loss of consciousness in 15 seconds,

Page 30

and in fact I do remember when we used only the 2.5 -- and that is my handwriting that shows five vials and 2.5 -- the inmate was unconscious in 15 seconds and we didn't change the order of rotation, size of the syringes or the guards that are actually doing the injections.

Q And do you remember about how long you had to mix the drugs?

A We have about a ten-minute window to make a decision.

Q Was that the case with the Gray execution as well?

A It's always.

Q Okay.

A We arrive approximately an hour before. We have to prepare the central line tray, get all these drugs from their different locked sources, get all the tubing arranged, the EKG monitoring, the IV tubing, mix all the different solutions and flushes, so while we're not rushed or stressed we definitely don't waste any time. Because we arrive, we have experience, everybody knows what to do. They get the job done. And for that reason I am the one

that always mixes the pentothal because it's very difficult for someone who is not used to this to accomplish it.
Q Sure. So you took about ten minutes during the Gray execution. At the end of that ten minutes were the 2.5 grams fully dissolved?
A Yes.

Page 31

Q And on what do you base that?
A I would not have proceeded had it not. I would have modified, added more solution, transfer it to another container, do whatever was required. Had I had to switch to two syringes, then there would be a problem with the timing. Then I would have notified someone and said, hey, we're going to have a problem, it's going to take twice as long to inject the first drug. I made the decision that I could have sufficient in the same syringe, the timing of the execution would be exactly the same, and for the people doing the injecting, I didn't have to change their understanding of what they had to do, that they had to do this one -- the people who do the injections are nonmedical and they're in the dark so they have a small flashlight that they're able to quickly identify the syringes, make the appropriate connections and injections, disconnect, clamp the tube, and changing the number of syringes or the order of syringes was an unnecessary risk.
Q I see. So did you consider using two syringes?
A No, because I was able to get 2.5 in one syringe.
Q So you didn't consider it an option to fill two syringes each with --
A I could have done whatever was needed, but had I changed to two syringes, then I would notify somebody that this is going to be different. There was going to be a

Page 32

delay, because we have to add an extra syringe to the process. Since I was able to get 2.5 -- and I knew two grams was more than adequate. Actually had I gone down to one gram I would have notified somebody. But as long as I was within the 2 to 2.5 range and I could get it all in one syringe, they didn't want to be ' othered, because as far as they were concerned this was going to go as smoothly as it always had.

Q So you didn't want to add another syringe because it would increase the amount of time to do all the injections?

A It would confuse the nonmedical people giving the injections. These are nonmedical people. They're either guards, wardens, whatever, whoever they designate to do the injecting. That's the first time probably in their life they have picked up a syringe, and it's a Luralock twist connector and then they have a separate clamp where they have to clamp and unclamp the tubing, so it's a little stressful for them to be doing this and still have to do these manipulations. I mean, I can do it in my sleep, but for them it's a job. So I had to keep it -- my objective there was keeping it consistent so nonmedical personnel could understand what they were doing and it wasn't any different than they had seen it done before or they had done it before. That was my priority.

Q I see. And so for the Gray execution, how many cc's

Page 33

of thiopental solution did you end up with?

A I think I wound up with 40 cc's, from memory, 40 cc's of 2.5 grams. Again, speed and route is as equally important as a lot of other things. So if you have 2.5 and you can get it in 40 cc's -- again, there's no way to know

what the final result is going to be, so I had 2.5 in 40. It made no sense to add another 10 cc's of nothing when I had it all dissolved in a 40 cc syringe, which basically again is one dose, and save time on injecting.

Q It's my understanding that the syringe holds 60 cc's; is that correct?

A Actually it holds 70, but some are marked 50, some are marked 60, so therein lies the confusion of whether we use a 50 or 60 or 70 cc syringe. I could put 70 cc's in all of these syringes, but the markings go either to 50 or 60.

Q I see. And you didn't consider dissolving more thiopental and additional --

A No, because we had more than enough. And by this time I was more than -- after several other experiences and also dealing with other states and communicating with them, and also realizing their responding outside pressures, I was entirely comfortable that anything over two grams was more than enough for any execution, provided that the inmate did not weigh over 300 pounds.

Q Sure. And just so that I'm clear, is there also a

Page 34

flush solution with Heparin in each syringe?

A I do that simply because it guarantees that there will be one minute between the injection, so part of that has to do with getting a rhythm for the individuals giving the injections and it allows the other one to flush and circulate sufficiency to have an effect.

Q I'm sorry. I am having trouble following. You say it guarantees one minute between injections. What do you mean?

A It takes a minute to clamp, unclamp, grab another syringe, reclamp, unclamp and start injecting. So, yeah, then they inject a flush and then after they flush they

clamp, unclamp, unhook the syringe, then grab another syringe of the next drug and then start injecting that, so you can't -- if you rush, you can do it in two and a half minutes. If you take it slowly, you can do it in about three minutes. So there's so many physical clampings and unclampings that it takes a set amount of time to do the injection. I take that into consideration when I prepare the solution.

Q So you're aiming for about one minute --

A They can inject a syringe in 30 seconds and it takes them 30 seconds to reconnect another syringe after they've flushed.

Q I see. And I'm still having trouble following. I'm

Page 35

sorry. I think there are six syringes total?

A Just an approximation.

Q Okay. So if there's six syringes total, I'm sorry, so is it about two syringes per minute, is that right, to get it done in three minutes?

A The guards understand this. They just simply pick up the next syringe and give either half or the entire amount, and it takes about three minutes because the time of death, as you see from the logs, occurs at three to five minutes that we announce and that's the time when electrical activity is completely ceased so we have stopped injecting for at least two minutes at that time.

Q I see. And which syringes do they give half of?

A One of the flush.

Q Is there just one flush syringe?

A Two flush.

Q Okay. Thank you.

A They are colored differently. We added a coloring agent so they are easy to identify in the dark. We use a

methylene blue solution so they are a bright blue color even in the darkened room where we're working so they can easily identify them. Even though they're labeled, they are also a different color so they know which syringe they're injecting even if they can't see the labels.

* * * *

Page 37

* * * *

Q I'm sorry. I think you said a little bit earlier that you improvised a method for dissolving the thiopental. Could you explain that to me again?

A Well, it depends on what they hand me, what kind of corks, what kind of needles, what kind of glass bottles they're in. I could dump it in an ashtray and pour water in it and suck it in a syringe, that would be one way to do it, but I'm trying to do it in a sterile fashion and medical fashion. So I'm able to put a needle around the plastic stoppers and inject solution into the powder and then aspirate it through that same 50 cc syringe. I'm able to do that five times on five separate bottles without spilling too much and getting assured that I have 2.5 grams in my final solution after I have shaken up those five vials.

Q I see. And maybe if you state it more simply for me, because I'm still not getting it. So you start out with the syringe and a bottle. And is the thiopental powder in the bottle or in the syringe?

Page 38

A The thiopental is in bottle, but it's not a bottle in the sense -- it's a straight cylinder tube with a plastic cork that is designed to lock on to another plastic cork that contains water. As the two mix, then it goes out the other end and there's a needle built into the system, so if

they use their system we would be required to break the needle off of either five or ten bottles and then connect these broken needles individually into our injection system and inject each of those individually, it would -- we would have 250 -- it would take five to ten minutes for these people to inject that as it's prepared, which is three times longer than our entire process takes. It's unacceptable.

* * * *

Page 39

* * * *

A Yes. They contain each about 100 milliliters of solution, so the total injection would be five or ten times 100. If we injected five grams or 2.5 it would be five individual injections. The problem is this broken needle is about one-fourth the size of our tubing. It does not have a locking mechanism so if you inject forcibly you can actually blow the connections apart. It just is totally nonacceptable for nonmedical personnel to deal with a drug designed for an anesthesiologist on a busy schedule.

Q Okay. So what technique have you developed to avoid that situation?

A As far as the inmate -- as far as the guards doing the injection, they can't tell there's any difference because they still walk in and there are six syringes the same color in the same block as it's always been, and there's more than adequate drug to accomplish our goal.

Q Right. So how do you mix the thiopental then to avoid the situation you were just describing where you have to break the needles?

A I simply use one of the 50 cc syringes and go to each individual bottle and I start with about 30 cc's in the syringe and inject it into each bottle, shake it until it's dissolved, withdraw it in the syringe, then inject that

Page 40

same solution into the next bottle, and do this five times. So it's a little labor-intensive but it can be done.

Q I see. And how many cc's do you end up with total then?

A In that case, 40 cc's, but I wasn't going to change and say oh, I mean to add five because somebody might come and look at this later and think I made a mistake. I knew what I was doing.

Q So you put 30 cc's --

A 40.

Q I'm sorry.

A 40 was in the record there.

Q I'm sorry.

A I may have started with 30, but by the time you add all the chemicals you may get to 40, so you have to allow for the chemicals being dissolved in your solution as you go through the process.

Q Okay. I understand. Thank you. That makes it clear for me.

So you also prepared a 2.5 gram dose for Michael Taylor's scheduled execution; is that correct?

A Yes, I think that's what it says.

Q That's just on the log, the entry, 2/1/06.

A Yes.

Page 41

Q Do you recall stating in an interrogatory answer, this is in your responses to the court's interrogatories, it's number 5 on page 6, do you remember stating that you used 2.5 grams for Mr. Taylor because you were aware that 2.5 grams had been adequate in Mr. Gray's execution?

A I was aware that two grams has been adequate all over the country.
Q Okay. Let's just look at your answer for --
A I know that's what my answer was. Yes, that was the best answer I could give at the time.
Q So when you said that the 2.5 was adequate for Mr. Gray, on what did you base -- what facts or experience did you base your judgment that it was adequate?
A Complete loss of consciousness in 15 seconds after the injection started.
Q Did you monitor Mr. Gray's anesthetic depth during the execution?
A I monitor -- the only thing that can be monitored is facial expression, and you can judge when the effect of the drug is accomplished, and that can be seen from across a room through a window. And when that effect occurs then I know the inmate is unconscious. And there's absolutely no difference in any of these injections. Again, because the tubing is eight, nine feet long, by the time the 15 seconds I know that inmate may have only gotten 500 milligrams of

Page 42

injection. That's the other reason we use -- allow premedication is because a calm, relaxed individual requires a lot less drug than an agitated individual. And as a physician I am there to make sure this man is in a calm state and that he has an IV injected -- inserted completely painlessly that will not fail during the course of the procedure.

* * * *

Q (By Ms. Anders) So you said that you can see that -- an inmate's facial expression from where you stand?
A Yes. That's the only thing any anesthesiologist uses in the course of inducing a person when pentothal was still

used, was you simply start injecting, look at the face, and again, it's difficult to describe, but I can tell instantly when the pentothal has taken effect. And in medical practice the instant the pentothal has taken effect they gave absolutely no more because then they move on to the actual anesthesia which has to be started before the pentothal wears off.

In our case, we're just worried about when he reaches that point, because there is a phenomena with pentothal where if it's given to some agitated individuals

Page 43

they can in fact have a seizure or, you know, they'll say this isn't working because they're agitated. And there is an effect of pentothal that will cause agitation or seizures.

So once that facial expression change has occurred, we know we're out of the danger zone and that this agitation or seizure will not occur.

Q And just so I'm clear, do you stand in the execution room? Do you stand behind the two John Does who are injecting the drugs?

A Yes. In case they have a question, problem, I am there to give advice. I'm not there to inject. But I can see the side of the inmate's face and that's all sufficient. He goes from looking toward witnesses to looking around the room to a completely relaxed facial expression.

Q Okay. Thank you. Just to go back to the mixing the thiopental. I think you briefly stated before why you thought you might have had trouble mixing the thiopental. Could you explain for me why again why you think that might be?

A Some companies, because of their suspecting that

somebody will try to mix the wrong dose or give the wrong dose, I know that certain drugs -- this drug is mixed with two containers so you cannot mix it any other way

Page 44

theoretically, but also some medications have an inert compound in or a secondary compound to prevent improper dose. The case in point being some cough medicines that have a small amount of epicate (phonetic spelling) that if you take too much cough medicine you will get enough epicate to cause vomiting. But if you take the right dose, you get the right amount of cough medicine but not enough epicate to cause vomiting. So there are many things in drugs that are used by the industry, and I suspect there was possibly an inert compound added to prevent improper mixing of these drugs.

Again, I am aware now that all of the pentothal we have has expired so I have no clue who is going to supply it, if we can get the next pentothal, if we have another execution. So I will have to review this with the Director to find out what is available or what he thinks we should do about changing it if we can no longer get this pentothal. I'm hoping we can still get it at least in one form or another.

Q You mean you might not be able to get thiopental at all?

A It's always going to be available somewhere. It may be more difficult or it may come in these doses that is very difficult for us to manage, but pentothal is like aspirin, it's never going to go away because it's part of a

Page 45

compound of drug that is -- well, I can tell you all

barbiturates, and it's a member of the barbiturate family of controlled drugs, and there's nothing in it that can cause heart attack, lung cancer, like these newer cosmetic -- newer drugs that are coming out that have these horrible side effects. Pentothal is not going to be taken off the market, so there's no reason for it to be removed from the market. It just may be more difficult to find.

* * * *

Page 50

* * * *

Q Okay. And what was the concentration of the thiopental solution for Mr. Gray?
A In his case we had 2.5 in 40 cc's I think, if I'm thinking of the right one.
Q Yeah, those figures sound right to me.
I'm sorry. Just because I can't see, are you doing a calculation or --
A Oh, no. I'm waiting for the next question.
Q I'm sorry. So you're saying the concentration would be 2.5?
A I'm dyslexic. I cannot figure those things out. I can't. I have to rely on the nurse. When I say give me the first med, she hands me the syringe.
Q I'm sorry. So when you were mixing the drugs for Mr. Gray and you said that the rate of infusion and the

Page 51

concentration made it -- made the 2.5 grams sufficient, is that a calculation that you would do at the time?
A No, no, that's just judgment. As long as I have 2.5 grams, whether I had it in 30 or 60, the priority was whether it was in one syringe or two. So once I had 2.5 grams and I knew from previous mixing that I could possibly

do it so I started with the smaller amount so when I was finished I had 2.5 grams in 40 cc's rather than 50 or 60 cc's. And to my understanding of what our objective was, that was better than just adding more inert solution to the mix to dilute the drug.

When we're giving it through a central line, a fast-flowing central vessel, the concentration is not a problem. It's only when you're giving it through a peripheral IV does the concentration affect the rate of infusion.

Q I see. So the concentration can affect the rate of infusion?

A If you're not using a central line, yes.

* * * *

Page 52

* * * *

Q I see. And for the next execution that occurs, assuming that you participate, what dose of thiopental do you think you'll prepare?

A I will recommend 2.5 if we have to deal with the same

Page 53

equipment that we're dealing with. If we get another supplier that supplies us one-gram bottles in premixed or mixable in 25 cc's each, then I will recommend to the Director we use the two-gram, which is a more convenient way of mixing.

It's only when we step outside the parameter of 2 to 2.5 in one 50 cc syringe is there a serious change occurring as far as I'm concerned, or that I would have to discuss this with the Director who relies on my judgment to make this happen.

Q Okay. So just to go back for a minute, you said that if you found a supplier who supplied it in one-gram bottles

you would recommend two grams; is that what you said?
A Yes.
Q So a total of two-gram dose?
A That would be more consistent with national standards as opposed to using three bottles and a three-gram dose. But again, that's just -- as long as you're over two grams you're going to have 100 percent unconsciousness after 15 seconds. It's only -- the one-gram dose is only insufficient when you have a serious drug addict or obesity over 300 pounds.
Q I see. So for a normal inmate you could give one gram?
A For most -- for everybody sitting in this room I

Page 54

could give you 500 milligrams and everybody would be unconscious. 500 is enough. That's why the new doses come in 500-gram bottles. That's -- the standard dose is 500.
Q When you say that 500 is enough, it's enough to render somebody unconscious; is that what you mean?
A In order to proceed with an anesthetic. This is not the execution setting. This is giving you an anesthetic. If you receive 500 milligrams of IV pentothal, you would be asleep and unconscious, but still breathing.
Q Would you be unconscious to the point where somebody could perform surgery on you?
A No, it's not an anesthetic. It's a sedative. It has no anesthesia properties. Surgery takes a long time and it wears off almost within minutes, so you wouldn't even have time to get ready to do surgery.
Q I see. So you wouldn't use thiopental alone if you were doing surgery?
A Never. It's not an anesthetic. It's a sedative.
Q But for an execution --

A It's a sedative.
Q Would a five-gram dose be sufficient for an execution?
A One gram would probably be sufficient if he wasn't a serious drug addict or a certain amount of body fat. But we're not in a position to change once we have started, so my recommendation to the Director was to -- and the

Page 55

recommendation of other states, is to go two-gram minimum to ensure they're going to get the 99th percentile, and if every state agrees that they're over three, 400 pounds they are going to have to go to three grams.
Q Would one gram be sufficient for you to do a quick surgery on somebody?
A No, never; it never works.
Q So would the person wake up?
A If I cut him, yes. They're not -- it has no anesthesia. It's a sedative.
Q I see. So --
A Anesthesia is what keeps you from feeling pain. Pentothal is just a sedation like a sleeping pill. If I operated on you when you were asleep, you would wake up immediately.

* * * *

Page 56

* * * *

Q So when you give thiopental for an execution, is the goal total unconsciousness?
A The goal is to render the inmate unconscious so the paralysis agent can be given and then the drug given to stop the heart beat. Again, you're arguing how many grains of powder do you put in a bullet if we were using a firing squad. The amount of powder in the bullet has very little affect on the effect of the bullet.

Q I see. So if you use pentothal to induce total unconsciousness because it's not an anesthetic, then somebody could still wake up if you --
A Given sufficient time, it's reversible, yes.
Q Okay.
A In 15 minutes he would probably wake up.
Q Okay. Let me step back. I think you said that thiopental has no anesthetic properties?
A That's correct.
Q So then if somebody is put to sleep with thiopental, then they might -- then if you cut them, they'd wake up?
A Depending on how much pentothal they had and how long

Page 57

you waited after the injection. But still that point has nothing to do with executions.
Q And why is that?
A We don't inflict any pain ever.
Q I see.
A It's all done through a central line. They can't feel anything.
Q When you say that, could you just sort of explain that to me?
A If you were injecting through the arm they might theoretically feel the potassium if they were not paralyzed, but by using a central line -- all the complications of lethal injection have to do with how the IV is put in, not with the drugs.
Q So when potassium is injected into the femoral vein, it doesn't hurt?
A Absolutely not.
Q What do you base that on, that conclusion?
A It's impossible. It's injected into a major free-flowing vessel.

* * * *

Page 59

* * * *

Q I see. So you're using 240 milliequivalents in 120 cc's or milliliters; is that correct?
A Yes. Again, we're trying to maintain the continuity for the people doing the injection. Since they're nonmedical people, they want to come in and see those six syringes just as they saw them the previous time because they don't want to make any mistakes.
Q I see.
A I could probably get by with one syringe if we always knew we were having that 240, but it's much easier for the other people to see this standardized tray with those syringes as they remember them from the previous time.
Q I see. So there was a point where the dose was not 240. It was 120?
A It was 120, and again this log is really -- people writing on the previous lines, and as I stated before I'm

Page 60

incapable of copying one line to the next consistently, but I try.
Q So when the dose is 120, you also used two syringes to keep it consistent?
A Always two syringes. Now, we did have one individual that I do remember when we were going through this where I recommended, because of the size of the inmate and because of what I previously stated, if we do not get the heart to stop on two syringes we then have to give two plus, meaning three syringes, so we'd have to give a total of five. It was much easier to have three syringes available and give it to ensure -- and the factor is called fat absorption, that the fat absorption of the potassium would not use up

enough of the drug that the heart would stop at an appropriate time.

So in one instance I recommended and did not check or tell anybody because it was based on medical dosage that this person would require a third syringe of potassium. And I don't remember whether it's even in this log, but one instance, because of the obesity of the inmate. And again, Texas, California, those places, they have no one that can make those decisions, so if they had someone of that weight, they might have had a serious problem. But we do this on an individual basis and for that reason I recommended that we use more so we would not

Page 61

be sitting there for 30 minutes waiting for the electrical activity to stop.

* * * *

Q I see. Okay. I think you said in one of your interrogatories, this was in the plaintiff's supplemental interrogatories, you don't have to turn to it unless you

Page 62

don't remember, but I think you stated you have had conversations with previous Directors of Corrections regarding your authority to make changes to the execution process?

A Well, we don't exist in a vacuum. I mean, we will, as we come in for the execution, basically I go to the Director's office. The Director is usually always there, plus his assistants, and so we will visit about this and he will ask are there problems, do you anticipate problems, have you had problems, in the course of that conversation. So there is some discussion every time there is a execution

if I anticipate problems or if I have adequate supplies or what do we need or what I would recommend to be done in the future, so, yeah, we do discuss these.
Q And do some of these discussions involve the scope of your authority and context of the procedure?
A No. He's relying on me to keep him looking good, to use his terms directly, so he does not have to go out and explain why we made a mistake or we may have a problem or why it didn't go smoothly or why a clamp was left on the tubing and we had to close the curtains and make an adjustment. That will not happen when I'm there.
Q So your understanding is that you have the authority to do whatever is necessary during the execution to ensure that it goes smoothly?

Page 63

A Yes. And if I can't get it done, I will contact him and he will make sure what I request is done. But so far we have -- we have anticipated every possible problem with this dosage, with these catheters, with these solutions, and we see no reason to make any significant change other than drugs not available or, you know, the catheters that we use, the IV tubing, all that is current state of the art.
Q I see. So it's your understanding from previous directors that you have the authority that is necessary to make the execution go smoothly?
A They're relying on me to make changes or suggestions that they will agree with if I think a change needs to be made. They're relying on my medical expertise. No other state has a physician that they can consult and say what went wrong when these guys set up in Ohio, what went wrong in Texas when they sprayed the viewers' gallery with pentothal.

Q I see. Have you had any discussions with Director Crawford about the scope of your authority?
A Oh, yes. We talk -- I talk in his office and at the time of the execution. In fact, he's the only director I have actually gone over to his office for other reasons and visited about this. And again, he has no background in corrections and he has no background in medicine, so the

Page 64

other corrections officers had long backgrounds in corrections so they were aware of what we were doing and why we were doing it. Since he has no background in either field, he reiterated that he's totally dependent on me advising him what could and should and will be done, and he will back up -- if I think there's a change that needs to be made, he wants me to quickly inform him so he can make the appropriate changes.
Q I see. So it's your understanding that if you thought a change to the execution procedure needed to be made you would -- Director Crawford would defer to your opinion?
A Absolutely.
Q And would you have to inform him first before making a change?
A If I made a change of the number of syringes or if I made a change of that magnitude, I would inform him that he is going to see different times. And that's the only way he's going to know something -- I would warn him that -- he's very used to sitting up in his office and seeing one drug, next minute another drug, next minute another drug. Two minutes later he's informed that we're finished. And if we had to add extra syringes or change something significant to where you can't physically inject that many syringes, then he would -- I would tell him it's going to be two minutes between the first and second dose and then

Page 65

he would understand and know why it happened. Or someone would ask him a question at the press conference, which he has to give, he would be informed of what that change was so he could answer intelligently.
Q I see. So let's just go through that a little bit. So what types of changes might you not inform him about?
A Well, when we could not mix the drugs, he would not care that we could not mix the drugs as long as I could mix a sufficient dose. If I would have required -- could not mix it that night and would require two syringes instead of one, I would immediately inform him.
But I have no way of returning from the execution chamber to the Director's office without upsetting their schedule so it would have to be a phone conversation, not a face-to-face conversation.
And I'm also aware that we have no other way to change once we're in that room and we're given the drugs that they thought were the right drugs when they arrived.
Q I see. So you have the impression that Director Crawford wouldn't care whether the drugs couldn't be mixed or something like that, as long as the number of syringes stayed the same, is that --
A Well, the only reason he would know the number of syringes were different is because the difference between the first and second drug would take two minutes instead of

Page 66

one.
Q I see. Have you ever had any conversations with Director Crawford that sort of gave you the sense certain things you would inform him about and certain things you

wouldn't?
A When these actions occurred in this state and other states, we were aware that we were going to be under a fine tooth comb so we were already exploring if certain drugs were ruled unacceptable we would have to go to alternate drugs. So I was researching and my conclusion was that it's going to cause problems if we have to switch drugs.
Q And what do you mean by that, that it would cause problems?
A Well, if Diprovan is going to be used, it requires a continuous IV infusion. You can't put it in a syringe and inject it. So the entire procedure is going to have to be changed.

* * * *

Page 67

* * * *

Q So just hypothetically, if you had to change an aspect

Page 68

of the procedure that wouldn't affect the timing of the drug, say giving a different drug but using the same amount of solution, is that something that you would inform the Director about?
A If it was the same number of syringes and we could give it with sufficient speed, the Director would not be aware. I mean if -- the reporters are watching this so closely that if there is a difference of one minute or so between injections or 10 or 15 minutes to time of death they immediately have questions about it. So if there would be a problem in what the public perceives, then I would inform him this is why this happened, this is why this didn't happen, so he -- since he has no medical background he wants to be informed and so I do a good job of keeping him informed why something happened. That's

more what he's interested in, rather than opposed to what am I going to change on my own authority.
Q I see. Is there anything that wouldn't affect timing that you would tell him about, any kind of change?
A No, because all he sees is the timing.
Q I see. So you'd inform him about something that affected the timing?
A If there was a perceptible difference in the way the execution was carried out that someone in the -- one of the three visitors gallery would ask him a question about or

Page 69

anticipate a question, why did this happen, why did he cough, why did he wiggle, why did he move, he's prepared to answer those questions.
Q I see. So you'd inform him about anything that happened --
A Absolutely anything.
Q Anything -- I'm sorry.
A Anything that could be noticed or questioned.
Q So you'd inform him about anything that happened during the execution that might be noticed by the witnesses?
A Yes.
Q Okay. Thank you. Are you aware -- are there any regulations or rules that require you to notify the Director about certain aspects of the procedure or certain changes?
A Absolutely not. This is just good practice.
Q I see. And is any part of the execution procedure written down?
A I have never seen it. If it was, it would have been written on my recommendations.
Q I see. Do you have any idea why it might not be

written down?
A I'm sure it's written down somewhere. If they're checking the logs of all the drugs every time we use them

Page 70

and recording expiration dates and number of sheets and needles that we use, I'm certain they have it written down somewhere.
Q But in terms of the aspects of the procedure that you're responsible for, that you perform, those aren't written down, to your knowledge?
A It might be written in there, but it would be written on by somebody observing what I was doing and using their interpretation. So if there was a written procedure that they had done I would -- you know, I'm curious to see what they think I'm doing, but I don't know that they write down the individual details of how I insert an 18-gauge rather than a 22-gauge or a 14-gauge needle.
Q I see. So people might write things down as you're doing them, but there's no guide that you follow as you're doing it?
A Absolutely not.
Q So you just rely on your memory?
A Yes.
Q And your judgment?
A Yes.

* * * *

Page 77

* * * *

Q So just hypothetically, if you were attempting to insert a femoral catheter on anyone and they moved and you ended up lacerating the femoral artery, what would you do about that?
A It would never happen.

Q Well, hypothetically speaking, if it did happen?
A Since I'm only using a 22-gauge needle for the initial insertion, this is like a small wire with a tiny hole, any laceration of anything could be controlled with 30 seconds of pressure and then proceed to try again.
Q I see. So what if you lacerated the femoral artery and a hematoma developed?
A You cannot lacerate it with a 22-gauge needle. It's two small. It's like a stick pin. It's no bigger than a safety pin needle and that can't lacerate.
Q Well, just assuming hypothetically using a larger needle or whatever --
A Cellular does not use a larger needle. It only uses a small needle to start the procedure. That's why we use

Page 78

that needle.
Q And just assuming for a second that a hematoma developed, what would you do about that?
A Reach over on the tray, take the knife that's provided with the tray, open it and vent it and it would be controlled. Actually under this setting, the hematoma would actually stop bleeding better than actually -- the medical treatment would be to drain it, but in this setting the hematoma is actually useful and it will stop the bleeding in a matter of seconds by itself.
So there's a medical reason why you drain a hematoma, but the reason in this situation was the hematoma would actually stop the bleeding. But we have never and could not possibly see a hematoma in this setting because of the small needles used.
Q So when you say that the hematoma would stop the bleeding, I don't really follow that.
A As it bleeds into the space it increases the pressure

around the vessel. The pressure of the hematoma is going to stop the bleeding no matter where the bleeding is.
Q So the bleeding would stop on its own?
A It would stop on its own.
Q If that happened while you were trying to get the catheter in for an execution, how would you then get the catheter in?

Page 79

A He's got two legs.
Q So you'd go to the other leg?
A Yes. And two vessels in the neck that I can use as back-up. I have never failed. The only instance that failed was an IV drug user who had been injecting his legs. I made two attempts on the leg and saw that we were dealing with a completely clotted vessel so I immediately went to the neck. I only have about a five-minute window from the time the inmate arrives where I have to make a judgment decision to get a sufficient IV in. So if I can't get it in the femoral in 30 seconds, I will then turn my attention to either the subclavian or internal jugular and quickly insert it in another appropriate vessel.
Q So you have about five minutes to complete the procedure?
A Five to ten minutes. That's all I need.
Q I see. And you have always completed it within that time?
A It takes two minutes.
Q Okay. And has femoral access always been the first choice method of obtaining venous access for an execution?
A It's my preferred method because it avoids all the complication with the subclavian. In the rare event that someone would perforate through the vessel in a subclavian you would actually hit the lung with that small initial

Page 80

needle. That could cause a pneumothorax after about four or five hours. Plus inmates can and will manipulate their shoulders which could affect IV infusion. Or could possibly grab or turn their head, dislodge the catheter. In a femoral vessel, it was chosen simply because it's the safest way to put it in. It cannot be dislodged. It cannot be manipulated by the inmate.

Q So they can't move their legs or anything like that?

A Absolutely not. They are completely restrained with over-the-knee, pelvis, shoulder straps, and full arm and ankle restraints. They could move their head because we allow them to look at their family, and they could turn their head and literally bite the bandage off of their arm, which I'm sure one might try to do some day, but with it in the leg that isn't going to happen.

Q So do you know if femoral access has always been used by the DOC since they started lethal injection?

A Since I was involved with the lethal injection and because of the serious problems they had on that prolonged execution, I have recommended and stuck by the femoral line which is foolproof.

Q So after -- so you came in after that problematic execution?

A Yes.

Q And you recommended femoral access?

Page 81

A Yes. They wanted me to do a cut-down because they thought that was the way to solve the problem. I informed them that I probably could not find a cut-down tray in the prison system anywhere or in the state of Missouri. It was

ancient.
Q I see. So you mentioned the cut-down. If you tried within your five or ten minute window to --
A It takes 30 minutes to do a cut-down.
Q Is it something that you might do if you had trouble?
A I haven't had to do one in 30 years.
Q Would you consider doing one?
A If I lived another 30 years I might.
Q If you had trouble with both subclavian access and jugular access and femoral access, would you --
A That can't happen.
Q Why not?
A Just -- God made it that way. You cannot clot all of those vessels off and survive.
Q So I think you said that the institution of femoral access, was that based on your recommendation?
A Yes.
Q And was that something that had to be approved by someone, or did you just decide to do it?
A No. They wanted a foolproof solution to their problem and they did not want to have to explain to the public why

Page 82

things did not go well, and I said this will solve your problem forever. And they were quite pleased that I did exactly what I said I would do, and it did exactly what it was supposed to do.
Q So when you suggested femoral access, do you know who made the ultimate decision on that to approve it?
A I told them that's what was necessary as opposed to a cut-down and this could be done quickly, safely, easily, and they were in complete agreement, in fact relieved, that they did not have to do a surgical procedure.
In the event that the central line is -- femoral

line is inserted and the execution could be cancelled, which is almost impossible, I can simply go in and remove that femoral line and hold pressure for 30 seconds and there's no damage done. With a cut-down it requires sutures and suturing a catheter. Removing the cut-down is a surgical procedure also.
Q I see. So you would rather not do a cut-down?
A It's totally unnecessary.
Q So was it the Director of the DOC who approved the femoral access?
A I don't even remember who the director was at that time. I only communicate directly with John Doe 4 or 5 and he passed the information on to the Director.
Q And then for the first execution that you participated

Page 83

in, you used the femoral catheter?
A A femoral catheter, yes.
Q Did someone communicate to you that that would be acceptable? Did someone tell you that's what you would be allowed to do?
A That's what I told them I was going to do because they had to order the special equipment to do it.
Q I see. So you told them that's what you were going to do and --
A Yes.
Q And they ordered the --
A They ordered it.
Q And in making your recommendation, did you consider the risks and benefits of a femoral catheterization?
A Yes.
Q And what risks and benefits did you consider?
A No risk. All benefit.
Q And what are the benefits?

A All benefits. There's no way it can fail. And no risk to the inmate.
Q So there's no risk of complication?
A Really, no. It's not put in until all appeals are satisfied. There's no chance there's a secondary appeal going to come. We have never, and don't even anticipate the situation would occur that once it's inserted that an

Page 84

appeal will somehow magically appear. So we don't really start -- and that's the advantage we have. It can be done quickly, but it can also be removed quickly. And that's what I communicated to the Director, that it was much easier than doing another surgical procedure to remove a surgical cut-down, and would allow rapid infusion of the drugs by nonmedical people.
Q I see. So the primary benefit of femoral is that it allows rapid infusion?
A Predictable infusion.
Q I see. And is your primary priority in performing executions the timing issue?
A It's as much as the weight, mental attitude, and in the rare instance, sex, total body fat, age. Those are all factors that affect the reaction to the drug, the doses used. These are all things that, while they have little impact, you can't ignore them.
Q All right.
A States where no doctors are involved, they ignore all of those variables and simply inject a standard amount by a janitor I guess is what one fellow is.
Q Right. And you mentioned several times that it's important that the injection procedure be quick.
A Yes. All drugs are time-related. I could give each of those drugs over a prolonged period of time on anyone in

Page 85

this room with absolutely no effect if you give it slow enough or through a route where it's metabolized. Each of those drugs is metabolized theoretically almost as fast as you give it if you gave it slow enough. None of these are lethal drugs. They are simply a dose of a drug that if not reversed has consequences. But the drug itself is the same drugs that are on the shelf in any pharmacy. At the time they were used, any pharmacy and any hospital had all of these drugs available and that's why they were chosen. Every doctor was comfortable with their use. They were quite aware what the drug was and what to expect.

* * * *

Page 86

* * * *

Q And if a complication occurred using femoral access for an execution, would you consider changing back to peripheral access?

Page 87

A No.
Q Why not?
A It isn't reliable or predictable or safe.
Q So by predictable, what do you mean?
A We know that we're going to have -- the inmate is unconscious in 15 seconds. He's paralyzed a minute and a half after that. His heart will stop beating three to four minutes after the injection starts. You cannot guarantee that with a peripheral IV.
Q So by predictable, you know exactly how long it should take?
A Yes. And you don't know that if you can't give the

drug rapidly.
Q And by reliable, what do you mean?
A We know it's going in there and it can't leak around the needle. When you use a peripheral IV, you're using a two-inch needle. You're not using a central line. So if you force it, it will leak and leak into the hand. In the case of the individual where the vein in the thumb was used, I'm sure most of the medication went into his hand rather than into his veins. With a central line that doesn't happen.

* * * *

Page 89

* * * *

Q So are there any complications that could make themselves -- that could become visible after you have left the execution chamber?
A No. Complications can occur months and weeks later due to long-standing problem, but the complications that you are referring to that occur with the insertion, these only occur on a person that is doing his first five insertions. After someone has done ten of anything, he will never have another complication for the rest of his life.

* * * *

Q I see. I'm just going to introduce an exhibit.

Page 90

You have just been given a photo which was part of the documents that the State produced to us from the Johnston execution.
A Yes.
Q I think that was 6/30/05.
A Yes, I think so.
Q Did you perform the femoral catheterization?

A Yes.
Q And do you see a hematoma in that picture?
A No.
Q Could you explain why you say that?
A I don't see one.
Q If I told you that three other physicians have looked at these photos and thought they saw a hematoma there, would that cause you to reconsider?
A No. They are just making your case. There's no hematoma there.

* * * *

Page 93

* * * *

Q And have you consulted with any other doctors or anything like that?
A No. None -- there's no other doctor knows anything about this. If I would ask another anesthesiologist, which I have, they are more interested in what the effects are because they have never done anything like this and they don't know what -- they really don't know what the effects are.
Q I see. Have you talked with other states besides California?
A Yes.
Q And what states?
A Lots.

* * * *

Page 95

* * * *

Q Did you also have the understanding that the DOC wanted rapid executions?
A They don't want to wait 25 minutes with witnesses standing around wondering what happened.
Q So 25 minutes would be too long?

A Five minutes is too long. There's no reason why it should take more than five minutes to perform three drug injections and that they should have the effect on the inmate. There's no point in prolonging this. That's cruel

Page 96

and unusual.

* * * *

Page 104

* * * *

Q So if you had to -- if you had to make a change during an execution, say in the heat of the moment, such as you mentioned going to neck access, is that something that you would tell the Corrections Director about after the fact?
A I would tell him after I was done, because once I start inserting this line I cannot stop. I have all the sterile equipment prepped and ready to go, so I simply take the needle and move to the neck area and insert it. Then I would so inform the Director. In fact, in the instance where I did change to a subclavian in the drug addict, I immediately informed the Director there was a different line and the bandage would be on the inmate's shoulder and visible to the gallery, because he was going to immediately

Page 105

be confronted by gallery, as I call them witnesses, and say what was that patch on his shoulder thing, I didn't see that before, or what was that, and he would immediately know that because of his addiction problem we had to use a different type of IV.
Q I see. So the one time that you went to neck access, that was a subclavian access?
A Yes. And immediately informed the Director when I did

it.

Q I see. And does the gurney that's currently in the execution room have the capability of tilting?

A I don't think so, but again we've had two or three different gurneys. If it's a hospital bed, it has a switch under the springs that allows me to tilt, or I simply, in this case where I put in a subclavian, two of the stronger guards simply lifted the bed twelve inches in the air and held it while I inserted the needle which took about five, ten seconds.

* * * *

**Appendix H**

**IN THE UNITED STATES DISTRICT COURT**
**WESTERN DISTRICT OF MISSOURI**
**WESTERN DIVISION**

| | | |
|---|---|---|
| MICHAEL TAYLOR, | ) | Case No. |
| Plaintiff, | ) | 05-4173-CV-S-FJG |
| vs. | ) | June 13, 2006 |
| | ) | |
| LARRY CRAWFORD, et al., | ) | |

TRANSCRIPT OF BENCH TRIAL PROCEEDINGS

BEFORE THE HONORABLE FERNANDO J. GAITAN, JR.
U.S. DISTRICT JUDGE

For the Plaintiff: MS. GINGER D. ANDERS
MR. ERIC BERGER
MR. MATTHEW S. HELLMAN
Jenner & Block, LLP
601 13th Street NW
Washington DC 20005
and
MR. JOHN WILLIAM SIMON
2683 South Big Bend Blvd.
St. Louis, MO 63143-2100

For the Defendants: MR. MICHAEL PRITCHETT
MR. STEVEN HAWKE
Missouri Attorney General's Office
P.O. Box 899
Jefferson City, MO 65102

Donna M. Turner RMR
U.S. Court Reporter, Room 7552
Charles Evans Whittaker Courthouse
400 East Ninth Street
Kansas City, MO 64106 (816) 512-5641

* * * *

Page 367

* * * *

Q What's your understanding as to how Dr. Doe came to the conclusion that he would be able to alter the dose on his own?
A He has had a lot of history with the state of Missouri and maybe -- and in the execution process. He was consulted when -- back when there was little knowledge -- less knowledge, I think, about lethal injection, and there isn't a lot of experts in this field, it's not a medical field, a medical procedure, and so he had put a lot of effort in working this. And other directors have depended on him heavily I think to provide a constitutional, humane execution, and I think he's taken that very seriously and feels that he has successfully been able to deliver, as

Page 368

does the Department and the people that I have talked to in the Department, on the executions before I became director, feel like he has done a very good job and successfully completed that mission.

* * * *

Page 374

* * * *

Q So it's correct that you have ultimate authority for all aspects of the execution procedure in Missouri?
A Under the constitution and law, I believe so, yes.
Q You spoke about the review process when you came on

board as director of corrections. You said you met with your executive staff to learn about the procedure. Did

Page 375

that staff include any doctors?
A No.
Q Did you consult any doctors in learning about the medical aspects of the execution procedure?
A No. I don't have -- I mean, I actually have a doctor on my executive staff, but I didn't -- I don't think I can say that I consulted with him directly about the injection process and the things that you are interested in. I did consult with him about other parts of the execution process.
Q Thank you. So then you didn't consult with John Doe One as a doctor regarding the medical aspects of the execution procedure?
A No, I did not.

* * * *

Page 376

* * * *

Q Have you talked to John Doe One since the deposition that took place?
A Yes, I have.
Q And could you describe that conversation?
A He called me actually. This was I think after his deposition, and probably wanted to reassure me that he had a constitutional -- the Department's best interest in mind, that he had always been focused on a humane execution, and gave me information about I guess sort of his level, some of his level of experience, which was great, in this process, and that he was willing to continue to do the good job he'd been doing and work with me as needed.
Q Did you find him credible in this conversation?

A Yes. And I have spoken to him in other conversations

Page 377

and a lot of times they were more of a waiting and more of a casual conversation, not about the medical side of this. So I have sort of gotten to know him over a period of time so I can judge him from that more than just this one conversation. I have known him to be very bright, professional, articulate, and quick, very quick.

* * * *

Page 379

* * * *

Q (By Mr. Hellman) Do you reserve the right to change this directive in the future after Mr. Taylor has been executed?

A Not in the -- not in the near future. I just only reserve the right to change it if need be, but I have no -- I -- no, I have no reason to just change it for the sake of any reason other than out of some type of necessity or as I

Page 380

mentioned before, new information, court orders.

Q Would this directive require anesthetic monitoring?

A No.

Q Would it provide for improved visibility of the inmate during the execution?

A I'm sorry?

Q Would it provide for improved visibility of the inmate during the execution?

A Visibility to the inmate?

Q Visibility of the inmate by, say, the medical personnel.

A It would have the same -- this directive would have

the same visibility that -- it would be the same as it has been in the past. There's a large window there and I have certainly had discussions with my staff about what they see, and it's different than what I saw in one picture.
Q So it wouldn't allow for a full view of the IV tube?
A No.
Q Would it impose any timing safeguards to ensure that the thiopental had taken full effect to achieve burst suppression before other drugs are administered?
A The procedure as far as the syringes and the timing that has been set forth successfully by the doctor, and there is some timing issues that I believe are important in this, would remain -- remain as they have been.

Page 381

Q Have you consulted with any medical personnel in deciding to make or not make any of the modifications you have just discussed and the other modifications you have talked about in your testimony today?
A Did you say consulted with medical personnel?
Q Yes.
A No, I have not. With any new medical personnel?
Q With any medical personnel, new or old.
A No, I -- no, I have not contacted anyone. I have given -- I have done some reading. Of course, we have had expert witnesses here yesterday and today that I have listened to what they have to say. And I am firmly convinced that while we use components of a medical procedure, this is not a medical procedure. The execution is not a medical procedure, and that would make -- makes it quite difficult in consulting with medical doctors that are charged with saving lives when we are ordered and under a duty to take a life under the law. And that is a difference.

And as director I have to -- I have to consider that if this was a medical procedure that required somebody to undergo anesthesia or to be rendered unconscious, in the first place, we don't do those procedures inside our correctional institution. We have contracts with hospitals and medical folks that do those in medical settings. So

Page 382

when I keep hearing the doctors, there's a very narrow -- a very narrow group of people that have any expertise, I believe, with a lethal injection and actually have experience in doing that successfully. I haven't heard any of those people actually in the courtroom here today or yesterday that have had those -- that have actually successfully carried out an execution under the law.

* * * *

Page 385

* * * *

Q Did Doe One ever tell you personally that he'd been giving five grams of thiopental, say, before the start of this year?

A Not that I can recall.

Q Did Doe One ever tell you he was having trouble mixing thiopental?

A No, he did not.

Q Or that he was dyslexic and had difficulty with numbers?

A No, he did not.

* * * *

Page 387

* * * *

Q And just to sum up, you rely on your staff and your staff rely on John Doe One for the discussion of the relative merits of femoral access?

A Yes, I'd say that would be fair.
Q Are you going to continue -- excuse me, strike that. Will you continue to allow John Doe One to take part in Missouri's executions?
A Yes.
Q Have you had any conversation with that individual about his continued employment with the state?
A No, I have not. I have not indicated that, but I have not indicated otherwise. I did just talk to him the one time that I mentioned. But that is my plan, if you ask, that he will.
Q So you have confidence in Doe One's competence and training to carry out executions?
A Yes, and I base that heavily on his success and the demeanor and the efficiency and all the information I have gathered from my staff and from state witnesses on the executions that I have been involved with and those before that he has been involved with, and he has been involved with all those I'm talking about.

Page 388

* * * *

Q (By Mr. Hellman) Do you believe John Doe One is correct when he says that it would be impossible for him to cause significant bleeding through the femoral catheterization technique?
A I -- I would have to qualify any of my answers on that with my relationship and what I have seen in talking with John Doe One, and I will say this, in talking to him more

Page 389

on a conversational level than on just a professional level, but he has a tendency to communicate sometimes by overstatements, and I don't mean being untruthful in any

way, or not professional, but he has kind of a quick way of overstating things to make a point. And so when I read that in his deposition I thought, well, you know, that's sort of like a story, if you were going to say how many mushrooms you found or how many fish you caught or how big your fish were, you might say, and he'd say something is impossible.

* * * *

Page 390

* * * *

Q And if he were to consult with you on a medical question, would you defer to him?
A I would give heavy weight -- I would give some weight because of his expertise in the execution procedure. I would certainly give some credibility. And he would have a part in my decision-making process, but I certainly don't -- wouldn't give him full credibility in that decision-making by any means.
Q What are you basing your view that John Doe One had, I

Page 391

believe you used the word success, in carrying out execution procedures? How would you know if he were not successful?
A I would think that if we had a -- well, it could be a myriad of reasons. One thing, we prepare the patient. My staff tells me that they're cordial, the doctor is cordial, that there is no pain. They are very responsive to discomfort. Staff and doctor are in communication with the condemned. In fact, some of them, there are various stages, we offer a sedative. Some of them don't accept those. Some of them do. Some of them are joking and talking and telling stories. Some of them are quiet. So, I mean, I even got a letter on just one of the recent

executions from an inmate condemned that did not leave a prepared last statement, but he thanked the superintendent of the prison on how he was treated. So I believe that -- I believe that we are humanely and properly preparing them for execution.

My staff tells me that after the first drug is pushed, the sodium pentothal, that they can see -- sometimes I mentioned there is a sedative given. We have even had to awake a condemned for the execution so that they can see their family or whatever. And they tell me that after they push the plunger it's just a very short period of time that they can see their head drop and them

Page 392

go to sleep, that they can just see them relax. And then a very short period of time after that the doctor, using some kind of electronic machine that flat lines, pronounces them dead. So to me a quick, a humane execution is one where I don't believe there is -- there is much pain, and then it's carried -- it's not a lingering death.

And we have had no reports of excessive blood or all these other scenarios that can be thrown out. Or somebody sitting up I think was mentioned before. So I think we're successful in doing that.

Q Are you aware of the effect that pancuronium bromide has on a prisoner, the paralysis effect?

A Yes, I am.

Q Does Missouri do any toxicology reports to ascertain how much of the drug, the drugs, were delivered to the body, after death?

A No, we don't.

* * * *